

543-7

October, 1889.

10,000 Copies.

• • • We are Now Operating Our Own Rolling Mills. • • •

• CATALOGUE •

—• OF THE •—

Cincinnati • • • • •

• Corrugating •

• • • • • Company,

PIQUA, OHIO, U. S. A.

SUPERIOR CORRUGATED

—• AND •—

OTHER SHEET METAL BUILDING MATERIAL.

• • The First Strictly Corrugating Company in America. • •

Entered according to Act of Congress, in the year 1889, by the
Cincinnati Corrugating Co., in the Office of the Librarian of
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IRON.

STEEL.

CORRUGATED ROOFING,

CORRUGATED SIDING,

CORRUGATED CEILING,

CORRUGATED ARCHES.

CORRUGATED LATH,

CORRUGATED SHUTTERS,

CORRUGATED DOORS.

STANDING SEAM PLAIN ROOFING,

V CRIMPED ROOFING,

ROLL AND CAP ROOFING.

METALLIC WEATHER BOARDS,

RIDGE CAPPING,

BEADED CEILING.

Estimates Furnished ON

{ CORNICES,
GUTTERS,
IRON PIPES.

PAINTED.

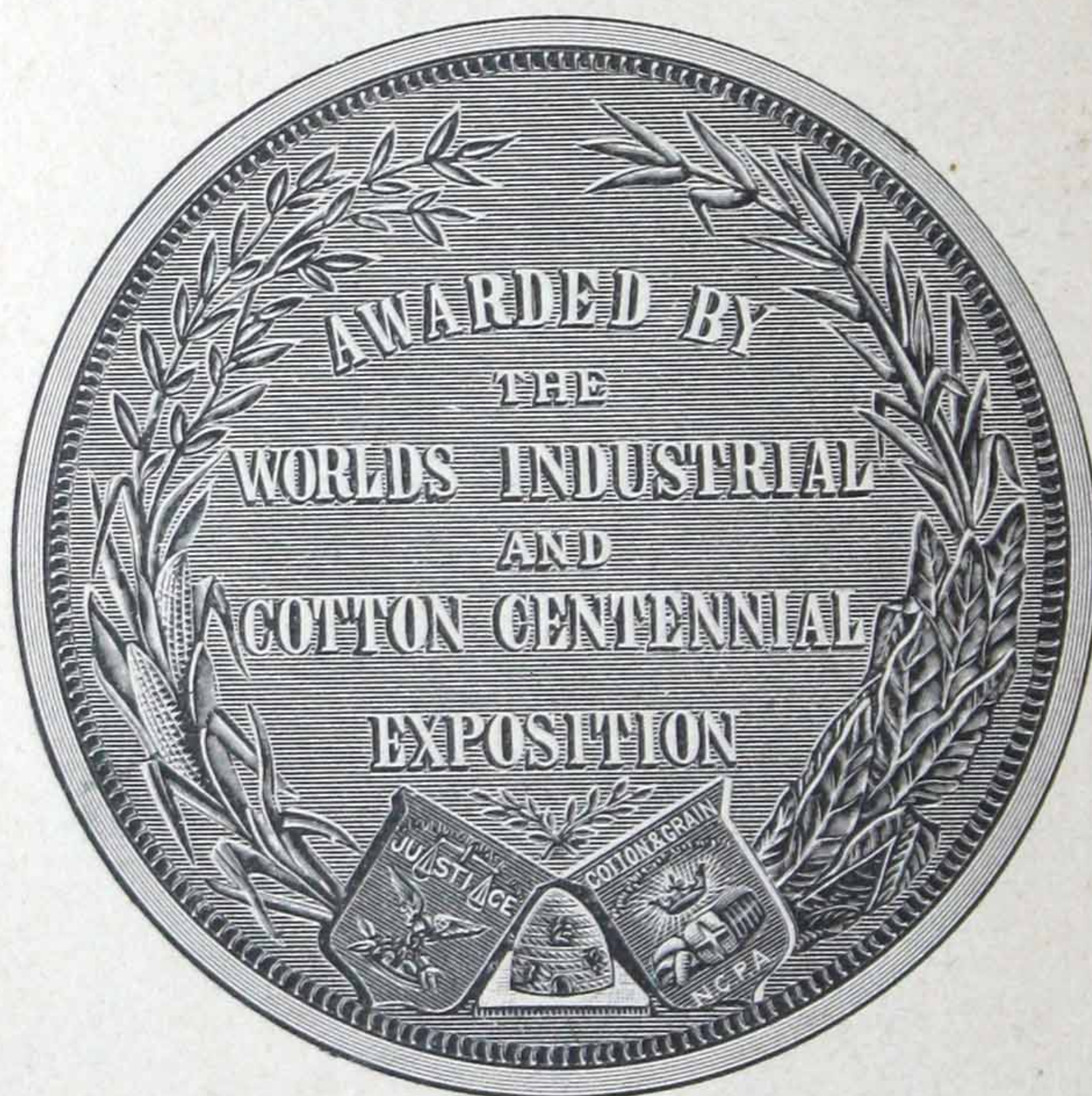
GALVANIZED.



The CINCINNATI CORRUGATING CO. ROLLING MILLS & FACTORY AT PIQUA, O.

SUPERIOR.

WE ARE LEADERS.



Gold Medal of the First Class Awarded in 1885 by the First World's Industrial and Cotton Centennial Exposition at New Orleans.

... TO ...

THE CINCINNATI CORRUGATING CO.

Our Stock is never Less than 1,000 Tons. This insures prompt Shipments.

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The Cincinnati Corrugating Co.

GENERAL OFFICE, ROLLING MILLS, AND FACTORY,

— Piqua, Ohio, August 15th, 1889.

To our Customers and the Trade Generally:

More than a year ago it became evident that our buildings on Eggleston Avenue, Cincinnati, although containing 30,000 square feet of floor surface, were becoming too limited for the increasing business of our establishment, which has always been the most extensive in its line in the United States. Hence we were compelled to consider the question of a more available location.

After comparing the advantages of several localities, we finally decided in favor of Piqua, Ohio; a thriving manufacturing city most eligibly situated, about 80 miles north of Cincinnati. We have been preparing during the greater part of the year 1889 for the removal and re-establishment of our plant at this place, where we shall enjoy facilities unequaled heretofore by anyone in our line of business, and unsurpassed at the present time.

In our new location we have the most modern Rolling Mills, operated by natural gas, and under our sole control; the most improved processes of annealing, forming, galvanizing, and painting our iron and steel sheets; machinery for grinding and mixing our paints; ample buildings and grounds, comprising 14 acres, for extending any buildings made necessary by the development of our specialties, as well as unusually good railroad connections for obtaining the lowest freight rates.

The control of the output of the Rolling Mills, both in quality and for quick delivery, without interruption from other customers for its products, will enable us to eclipse our former record of superior quality and prompt shipments in furnishing our patrons with reliable, durable and satisfactory Corrugated and Plain Roofings, Sidings, etc.

We trust that we shall be favored with a continuance of your patronage, and request that hereafter you will address all communications to

Yours Truly,

THE CINCINNATI CORRUGATING CO.

PIQUA, OHIO.

Corrugated Sheet Metal.

IN England and America has been in use longer than any other form for Roofing, Siding, Ceiling, etc. Whenever merit, rather than mere first cost is considered, it has been a preferred form of covering for fifty years or more. Hence, in the U. S. Government Buildings, Public Buildings generally, by Railroad Companies, and by the more permanent class of Builders, Corrugated Iron Roofing, Siding, Ceilings, Shutters, Doors, Lath, etc., have been used for many years.

Its superior architectural appearance, as well as its durability and effectiveness, induces this result.

The Corrugated is the strongest known form of sheet metal, and imparts material strength to the structure to which it is attached by its lineal rigidity. We know of Corrugated Iron Roofs put on over twenty-five years ago which are now apparently as good as ever.

To build up our business to its present considerable proportions we have been compelled to raise the standard of its manufacture to the highest perfection in quality, of both material and workmanship.

We use only re-worked, box-annealed iron and steel, all re-sheared before forming, which is done by pressure in dies by steam power, instead of by rolling. This gives our sheets their superior exactness so essential for tight Roofing and Siding, for economy in applying, and for uniform excellence.

Our aim now is to popularize Corrugated Sheet Metal on its merits, by selling it for general use to meet prices of manufacturers of even inferior covering materials.

Corrugated Iron will not rattle from expansion, contraction or wind, nor sag and buckle and present ugly and corrosive patches, where dust and water settle, as do many other materials.

It is only necessary to suggest the advantage of using this material for protection against fire. Insurance companies demonstrate its value by their ratings.

Nos. 27, 26 and 24 Iron are more generally used than any other gauges for Roofing, and, perhaps for Siding, although we keep and sell largely all gauges of standard thicknesses.

We make estimates when desired on spaces to be covered. In such cases, we must have detailed dimensions; see pages 13, 14, 15, 16, and 17

We Offer the Best at the Price of the Cheapest.

Fig. 1.



Shows our Straight Corrugated Sheet; 10 corrugations $2\frac{1}{2}$ inches wide by $\frac{5}{8}$ inch deep in interior, and $\frac{7}{8}$ inch deep at edges.

Regular lengths in stock, 5, 6, 7, 8, 9 and 10 feet.

When lengths are not specified we always ship 8 feet sheets.

All widths are uniform.

Full widths are 26 inches; Covering widths 24 inches.

When this iron is attached directly to studding or rafters which run in the same direction the sheets do, the distance between the centers of the studding or rafters must be 24 inches. However, we do not advise this method of applying, except on cheapest Buildings.

See Instructions for laying Corrugated Iron, pages 13, 14 and 15.

It is the custom of the trade generally, as is ours, in selling by the square, to furnish a number of sheets, the total superficial measurement of which equals 100 sq. ft. That is, without allowance for laps.

This is especially proper in Corrugated Iron, which is used for so many purposes, varying so much in requisite amount lapped, or for some uses not requiring lapping at all.

RULE FOR ESTIMATING ON $2\frac{1}{2}$ -INCH CORRUGATED SHEETS.

For Roofing.—Select the most economical of our regular lengths of sheets to cover your rafters, (allowing 3 inches end laps, and say 6 inches projection at eaves). Then add the lengths of sheets selected; then multiply their total length by the length of Ridge, adding 7 per cent.

Where *SIDING* is no higher than the length of one sheet, add 7 per cent. more squares of iron than the space will measure; when there are two or more rows, add 8 to 10 per cent., varying with amount lapped at end.

Regular Lengths, 5, 6, 7, 8, 9 and 10 feet. Widths, 26 inches.

Fig. 3.

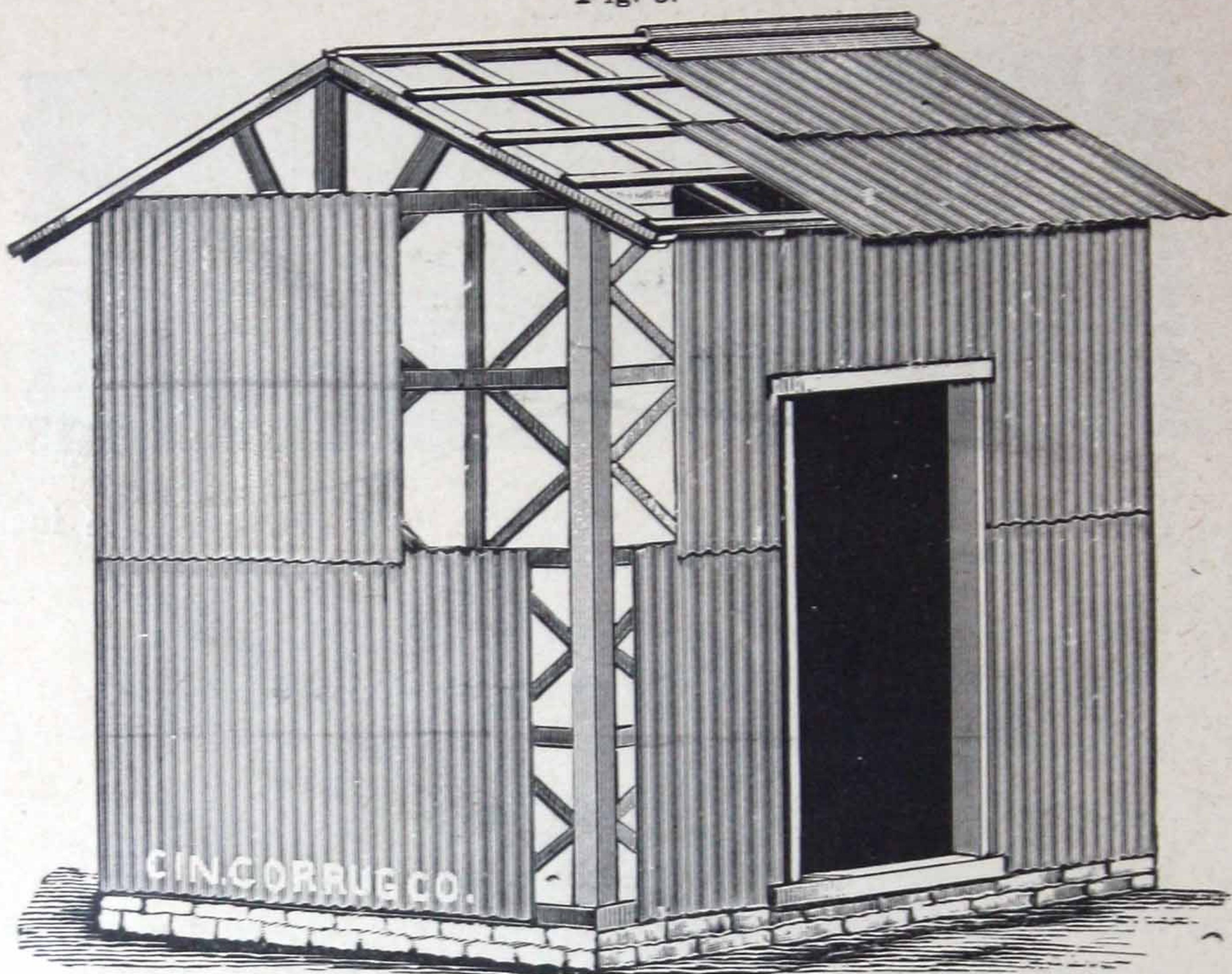
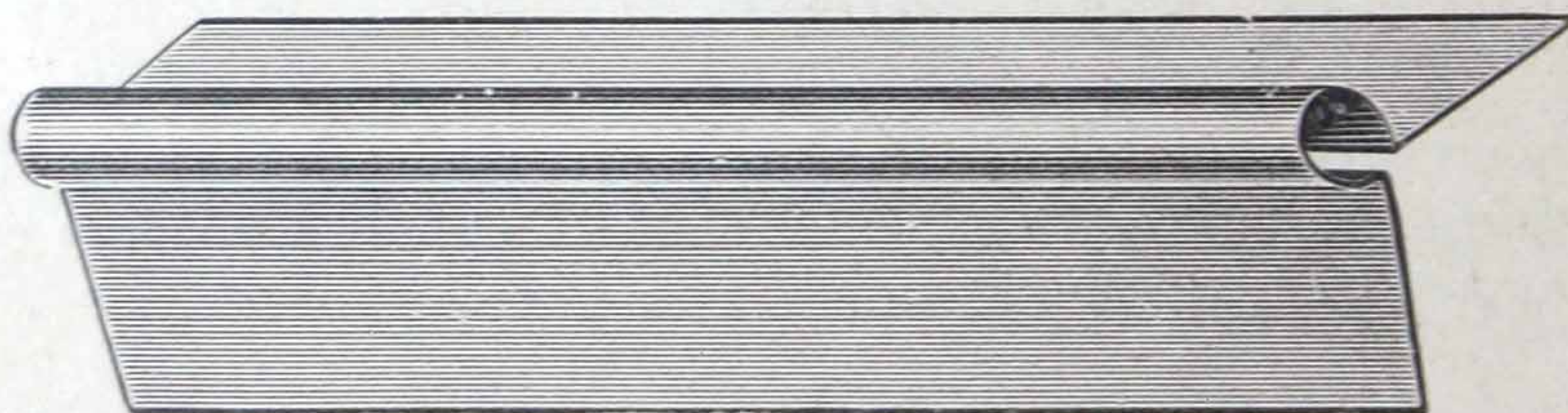


Fig. 3 above shows a Ridge Roof Frame Structure of simplest form, in process of being covered with our Corrugated Iron, and also shows application of Iron Ridge Cap, more fully shown just below.

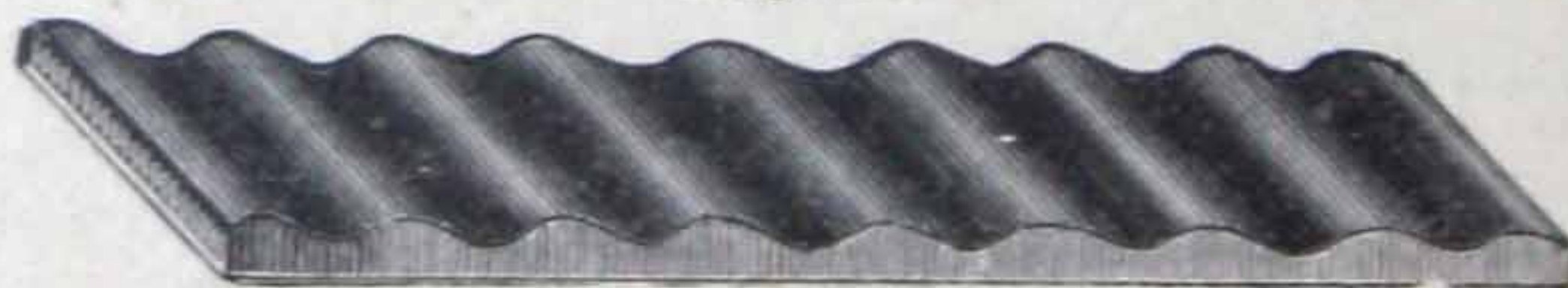
Fig. 4.



(Regular Lengths, 6 feet. Made in two sizes.)

This Cap is requisite for covering the joints on Ridges and Hips of Roofs, as well as for a finished appearance, as in Fig. 16.

Fig. 5.



Shows our Joint of Corrugated Wood, for going between Fig. 4 and the corrugated Roofing, on each side of Ridge of the Roof.

Allow Corrugated Roofing three inches pitch or more, to the foot.

This Joint is flat on one side, going next to the Cap, and corrugated on the other side to fit the corrugations of the Roofing.

This Joint is just the thing to use where Corrugated Roofing abuts against a wall where flashing is to be used—the flashing to be nailed over the joint and to the wall; used *only* with 2½-inch corrugations.

Ridge Joint is not absolutely required, except at ridges of roofs having less than three inches fall to the foot.

Fig. 6.



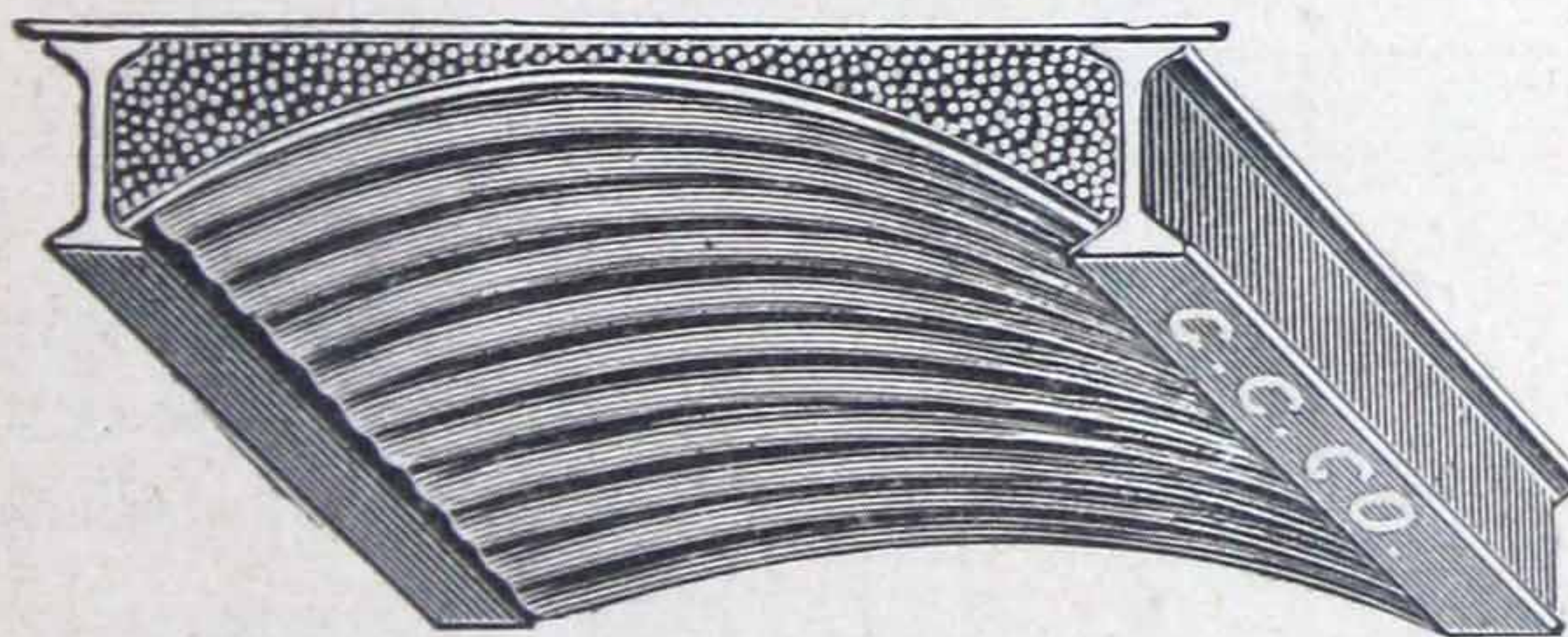
Shows a Corrugated Sheet Curved. These can be curved to any desired radius, within bending capacity of the material.

In ordering refer to Fig. 23.

We make these to specifications required, of Iron or Steel, and give especial attention to exactness in this kind of work, having a large patronage from the leading Architectural Iron Works, Bridge Works Builders, etc.

These sheets are in very general use, for purposes other than those indicated, as they present a handsomely finished appearance, and often save expense in construction; *e. g.*, for Lantern or Ventilator Roofs, Dormer Windows, etc.

Fig. 7.



Shows a section of Corrugated Iron or Steel Arch, for Fire-Proof Buildings, etc., in which our Corrugated Curved Sheets are used.

Send for special circulars on Arches.

These sheets rest on lower flanges of the beams, the space above being filled with concrete to, or above, the top of beams, as desired.

These Arches, for strength, lightness, durability, and fire-proof qualities, cannot be excelled.

Corrugated Arches have often been tested, and when No. 18 W. G. has been used, have never shown any deflection at a pressure of 1,000 lbs. per square foot, and very little deflection at 2,000 or 3,000 lbs. per square foot. (Trautwine, page 371, Ed. 1883.)

Use 2½-inch Corrugation for Curved Sheets.

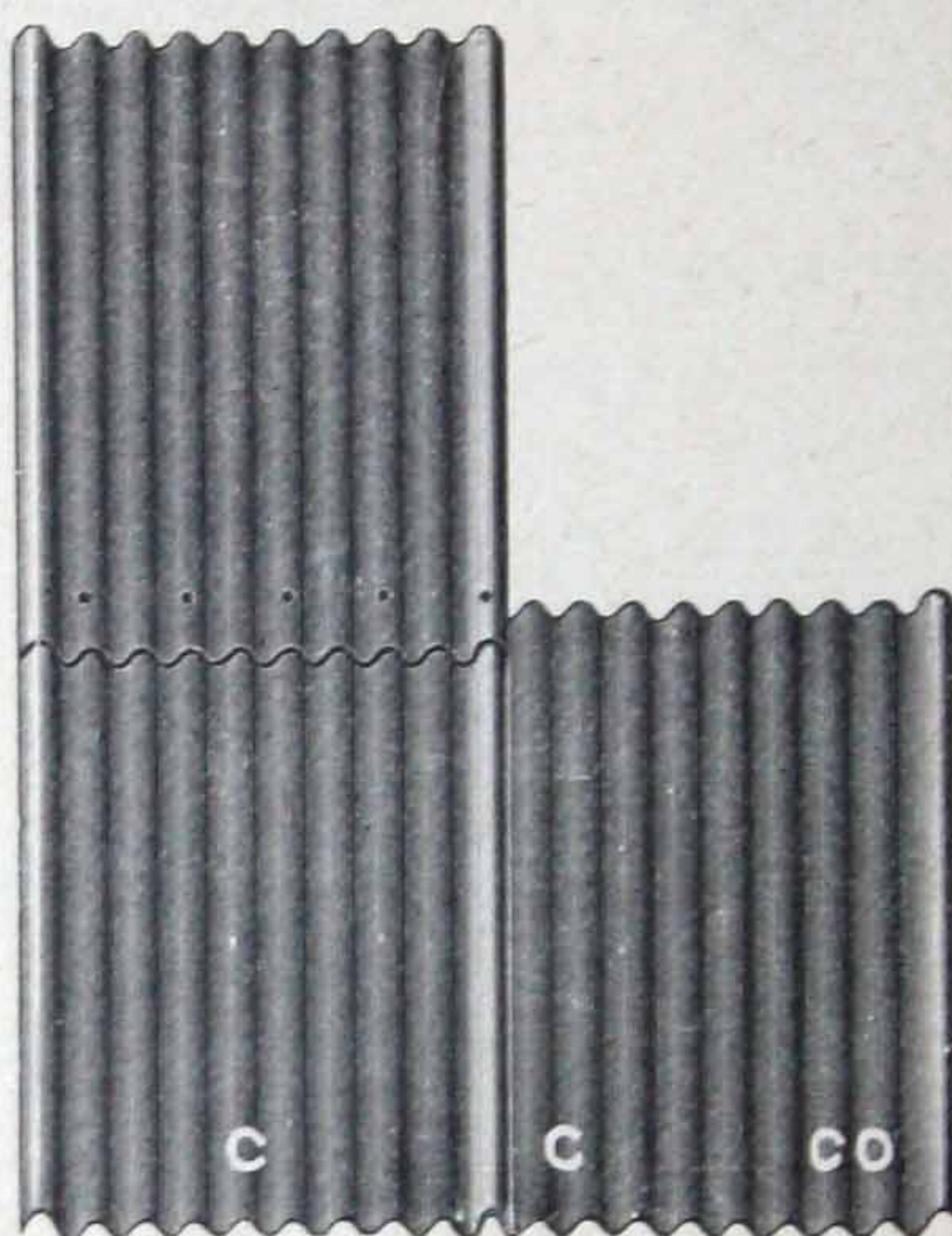
The Weight of the Arches with the concrete filling on top of beams is very little over one-half that of a brick arch and concrete filling to the same height, thus allowing fewer or lighter beams to be used and lessening the load on the walls.

These floors are from 25 to 40 per cent. cheaper than those built of brick arches, or in fact any other fire-proof floor.

Curved Ceilings, when painted suitably, present a very beautiful finish.

The uses of Curved Sheets for Roofing, Ceiling and other purposes are infinite; and many will suggest themselves to the reader besides those here named.

Fig. 8.



Shows our Corrugated Elevator Siding for sides of any building liable to much settling.

These sheets are made of our regular widths (page 5) but usually, say thirty-two inches long, so they need be nailed only on the lower end; our Patent Edge Corrugations stiffening the sheets so much that nailing at sides is unnecessary.

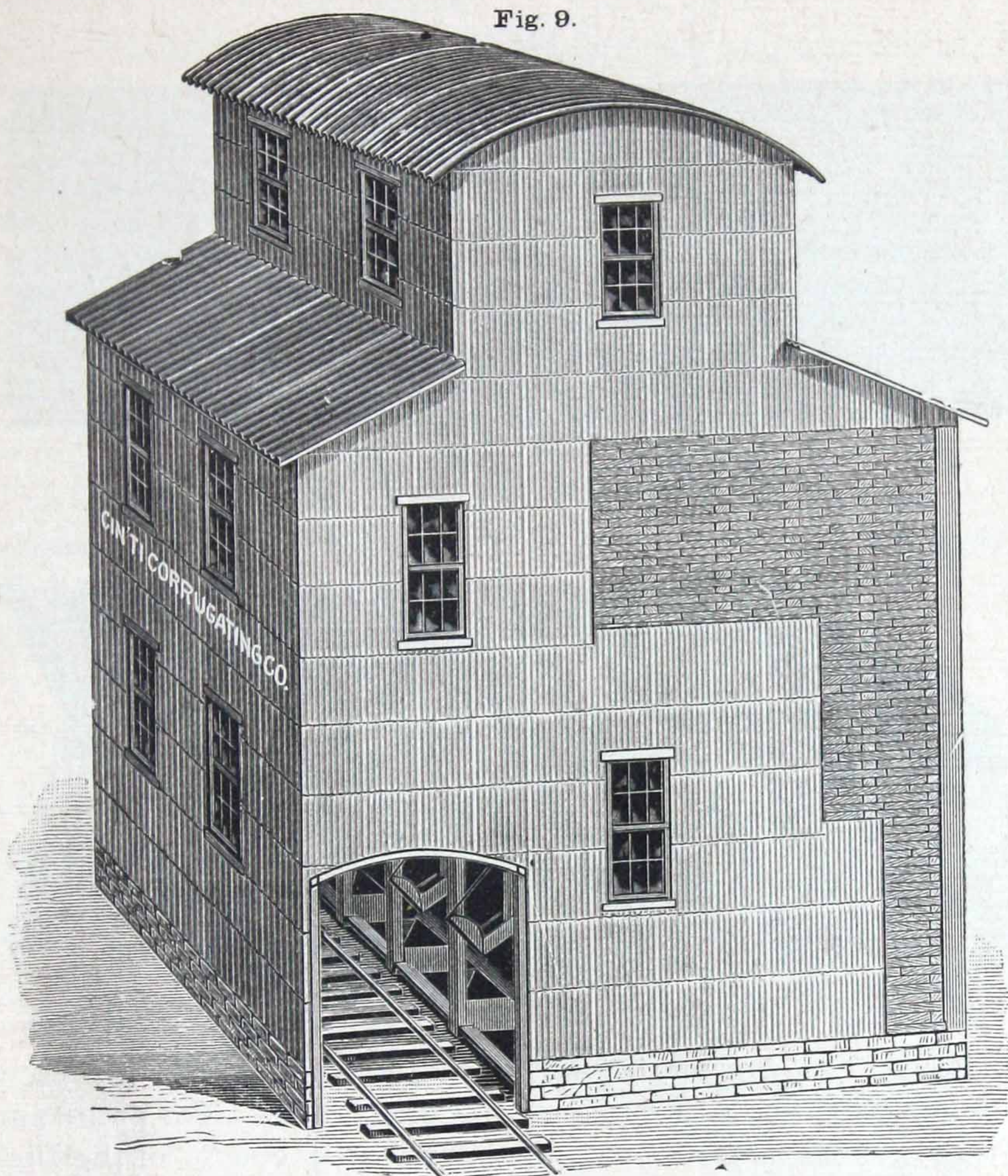
Each sheet is nailed two inches above the edge and there is an inch lap, allowing the sheet to slide an inch, before the nails, by which it is attached, impinge on the lower sheet; each sheet, in fact, acts independently.

The Sheets being applied with one-inch end lap and the nails being one inch above the upper edge of the lower sheet, the sheets are enabled to slide one inch in thirty-two inches, as the sides of the Elevator settle, and will not buckle or draw the nails.

In an Elevator, as all know, the strain is on the outer wall, when it fully settles down.

Our Patent Edge 2½-inch Wide Corrugation is best for Roofing.

Fig. 9.



Shows application of our Curved and Straight Corrugated Iron to an Elevator, Mill, or Railroad Depot.

This makes a substantial, durable, fire-proof covering of the finest architectural appearance, with which no plain sheets can at all compare.

Fig. 10.



1 1/4 inch Corrugation.

Use Roll and Cap Roofing for Flat Roofs.

COPYRIGHTED.

Fig. 11.



2½-inch Corrugation.

Shows relative appearance of two sizes of Corrugations.

Fig. 13.



Shows our Improved Patent Edge, Corrugations 2½ inches, with new method of nailing—through *tops* of Corrugations. See pp. 18 and 23.

The 1¼ and ⅝ inch Corrugations are made chiefly of the Lighter gauges, and especially approved for Ceilings, Linings and Wooden Shutters, combining an artistic finish with thorough fire-proof qualities but are not recommended for Roofing.

Where used for interiors, this Iron is usually repainted when in place, to suit the taste of the users.

This Iron is easily applied by any ordinary mechanic, without special tools or instructions other than contained herein.

With the 1¼-inch Corrugations our sheets measure—

No. 22.	full width	25 inches,	} when lapped one corrugation will cover 24 inches.
" 24.	"	25 "	
" 26.	"	25 "	
S. R. G.,	"	25 "	

We make also a very small corrugation, 3-16 inch wide, and of very slight depth; sheets usually eight feet long and twenty-six inches wide, and standard Roofing Gauge.

Regular Lengths of 1¼ and ⅝-inch Corg. Sheets 5, 6, 7, 8, 9 and 10 feet.

This is used largely for fire-proofing Wooden Shutters, Sliding Doors, for Inside Wooden Frame Work, Timbers, etc., etc., for which it is more suitable than plain, flat iron.

This Corrugation is so small that it can be bent crosswise, and indeed used in almost any place where flat iron can.

The actual size of this corrugation is nearly that of Fig. 11.

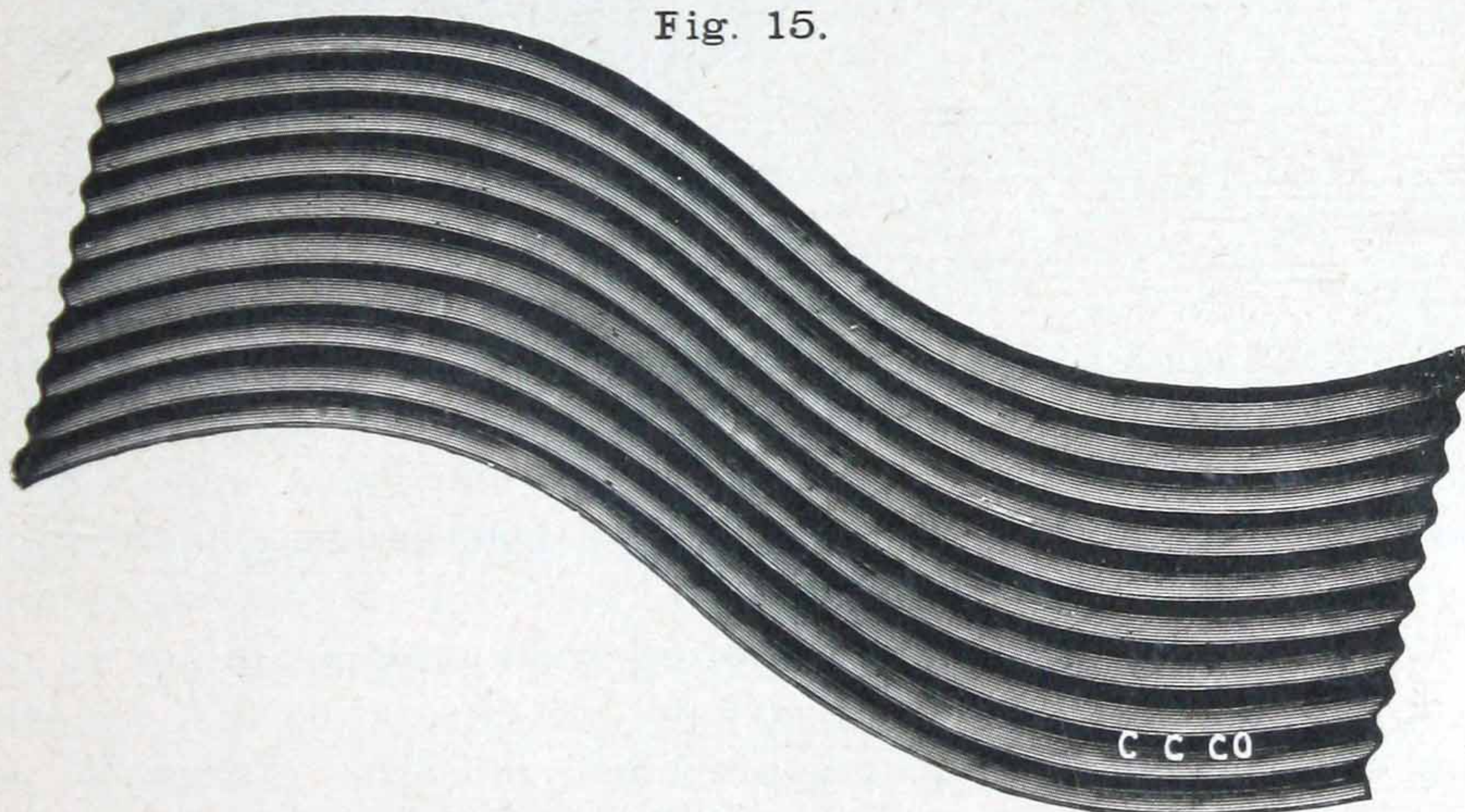
Our Beaded Iron Ceiling is very neat and tasteful. Samples mailed on request.

Fig. 14.



Shows our Angle Ridge Cap; this is less expensive but equally as effective as that shown in Fig. 4. Made in two sizes.

Fig. 15.



Shows our Double Curved Sheets for Awnings, Roofs, etc.

Fig. 16.



Shows clearly the practical application of Iron Ridge Cap and Wooden Ridge Joint to Corrugated Iron Roofing, demonstrating the usefulness of the combination better than anything but a storm could.

Regular Lengths of Ridge Cap, 6 feet.

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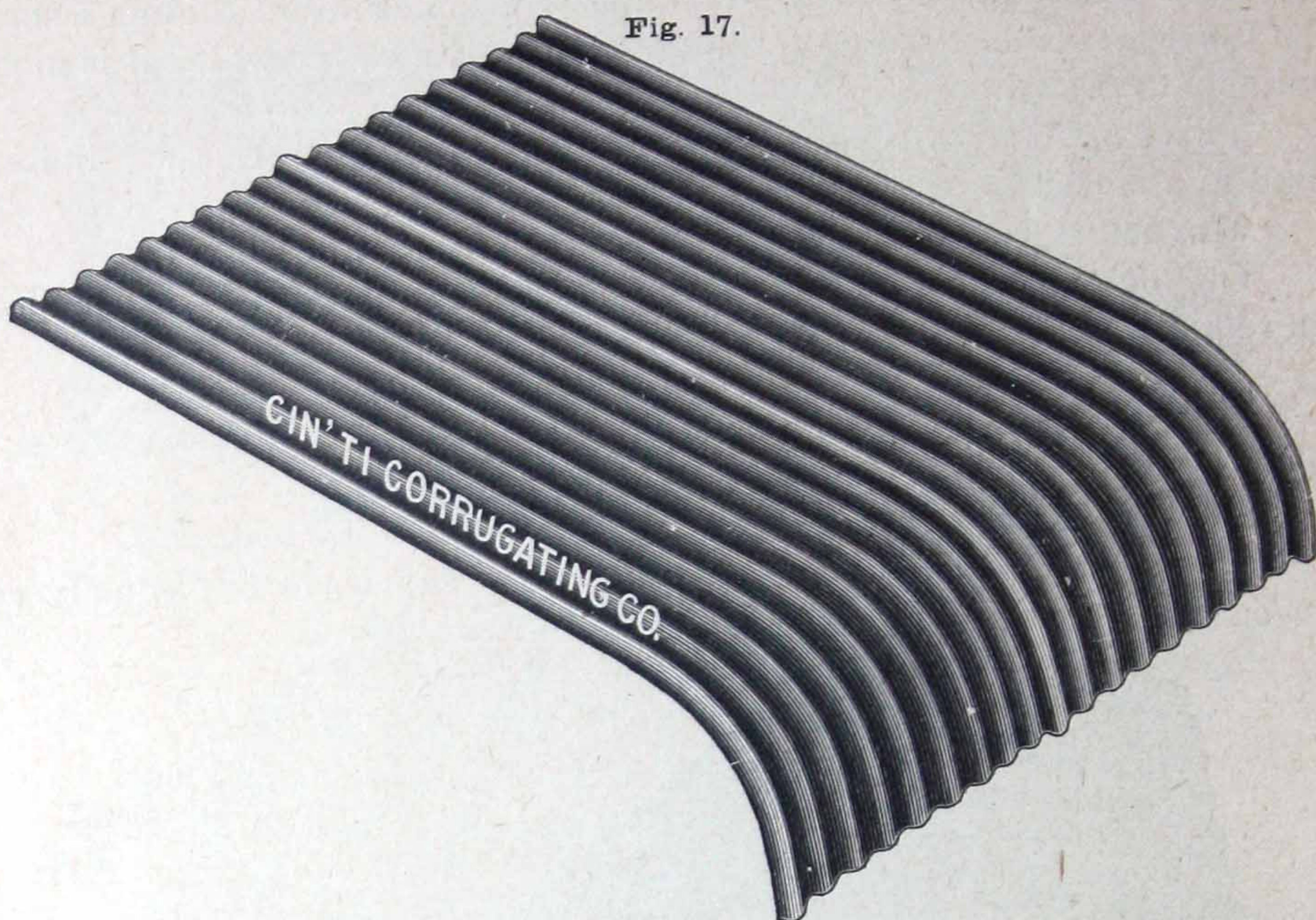


Fig. 17.

Represents a favorite style of Permanent Awning manufactured and sold very largely by us. It is in extensive use in Philadelphia and other eastern cities, where it is deservedly popular. Our Patent Edge Corrugations give these awnings a neat, paneled appearance. We will also furnish designs and estimates, when desired, on iron frames for awning supports.

We always corrugate before painting, thus avoiding injury to paint by the machinery. In the ordinary process of painting first, the corrugating causes more or less scaling off, which, of course, carries the paint along, leaving many bare patches, which soon rust.

Fig. 19, on the following page, shows the Flouring Mill of Messrs. Cowen & Co., Memphis, Tennessee, covered with Corrugated Iron. Note its use on Sides, Awning and pitched portion of Mansard Roof. For deck of such Roofs our Standing Seam Plain Roofing is the best—see pages 24 and 25.

The appearance of Corrugated Iron for Mansard or Steep Roofs is far superior to that of Metallic Shingles, as the latter can not be distinguished unless very near to the observer.

We have many similar examples in different parts of the country.

This view answers very well to indicate the appearance of such buildings, which is far superior to that of other material of equal cost, while it is equal to any in effectiveness, and of far greater economy and safety from fire.

Our Rolling Mill and Large Stocks Make Promptness Certain.

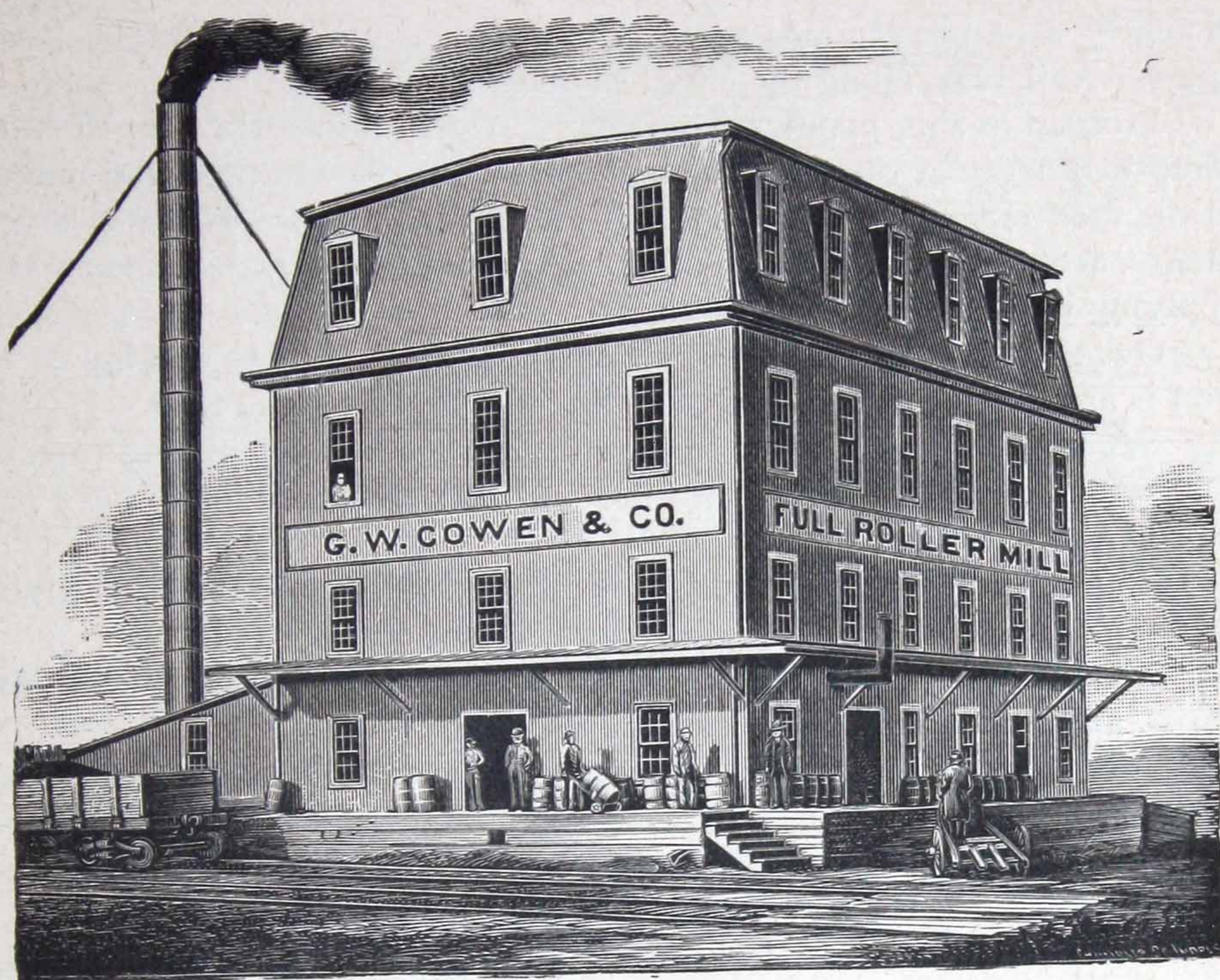


Fig. 19.

Instructions for Applying Corrugated Iron.

FOR ROOFING—WOODEN FRAMING.

The only reliable Corrugated Iron for Roofing, now made, is our Patent Edge $2\frac{1}{2}$ -inch Corrugation.

Begin to lay the sheets from the eaves, the first sheet covering the lower left-hand corner, projecting one corrugation over the side, and about three inches over the eaves. Hammer the projecting side corrugation down against the edge of sheathing, nailing it in place. Nail across the sheets at eaves through tops of alternate corrugations.

Next, place the second sheet to the right of the first, lapping over one corrugation of the first, and with the same amount of eave projection.

We recommend that while the Roofing is being put on, you use a *continuous* string of thick metallic paint, paste or cement—made by mixing our dry metallic paint with linseed oil—between laps of sheets, to aid in making them water-tight. Where this plan has been adopted, there has not been the slightest cause for complaint.

Nail through these two sheets where they lap, and directly perpen-

Reversed Ends of Roll Corrugated Sheets can not match.—Ours do.

dicularly *through the tops of the corrugations*, and about eight inches apart. Nail, also, along the eaves as on the first sheet.

Proceed in this manner from left to right across the length of the roof, then begin at the left and lay the second row in the same manner as the first one, allowing the sheets to lap over the first row three to four inches, according to the slope of the roof and the length of sheets used, applying paste same as in side seams.

Owing to the exactness of our corrugations, 3 inches end lap of our iron is as effective as 6 inches of ordinary roll corrugated iron.

When nailing across the lower ends of sheets in the second row, put the nails about two inches from the end of sheet in order to have nails pass through both sheets.

Do not put any nails at all through the interior of sheets. Always *drive nails perpendicularly*, and through *tops* of corrugations.

We recommend the use of our Cone Head Steel Wire Nails without barbs, and for roofing, those two inches long, No. 9 wire.

For Roofs with slight pitch, we recommend the use of our Wood Ridge Joint or Corrugated Wood, to be applied at each side of the comb or ridge of roof, and over which is to be placed the iron Ridge Capping, (See illustrations, Figs. 4, 5, 14 and 16 of Catalogue.)

If any difficulty occurs in fitting Ridge Joint, saw it in two, cross-wise.

NOTE.—If your worst storms and winds come from the left, you should begin at the right hand lower edge and work toward the left, and vice versa.

Where the heavier gauges of Iron are used, Nos. 20, 22, or even 24, sheathing boards may be dispensed with, *so far as providing support for the Iron is concerned*.

Where pitch of roof is considerable, for example, 6 inches to the foot, less lap than 3 inches will do at the ends of sheets.

Where the pitch is less than 3 inches per foot, we recommend the use of our Standing Seam or Roll and Cap Roofing. See pages 24, 25 and 28.

The rafters can be placed 3 to 4 feet apart, with purlins run through from 1 to 2 feet apart (see Fig. No. 3)—1 foot is preferable where No. 24 Iron is used—the pitch must be considered in this.

With the lighter numbers, Nos. 26 and Standard Roofing Gauge, purlins or sheathing are recommended, but latter does not require to fit close, for general use.

For flashing, see remarks under Figs. 5 and 28.

Flash over a "Cant Strip," at upper side of skylights.

Where warm air, steam or sulphur will come in contact with under side, use our Paraffined Felt Lining.

Put shortest sheets nearest ridge

Nails and Dry Paint always sent unless otherwise ordered.

FOR SIDING—WOODEN FRAMING.

Use either 2½-inch or 1¼-inch corrugations.

In planning your structure arrange height of sides for using regular lengths with least lapping at end of sheets.

Commence at bottom, running first row across side, lapping one corrugation at side.

Our Patent Edge 2½-inch corrugations present a paneled appearance.

Be very careful to keep Edge Corrugations plumb, and in line.

Put the second row on in the same manner, lapping ends of sheets down over the top of the first row—one inch is sufficient for the lap.

Where used without sheathing boards, the studding should be framed to measure from center to center, or if preferred, put the studs say 3 to 4 feet apart, and nail the sheets to purlins, placing purlins say 2 feet apart and across the studding.

Nail siding vertically on tops of corrugations, and horizontally between the corrugations.

When studding is used, 2 x 4 inches will answer, usually.

Using heavy iron and dispensing with sheathing boards lessens danger from fire, thereby reducing insurance.

When the liability of damage from outside contact is considerable, heavier gauge should be used than otherwise necessary.

Do not let the iron siding have contact with the ground.

Our corrugated Iron can be used frequently as a substitute for cornice work in a very effective manner, by giving the subject consideration.

A strip of iron corrugated diagonally or one used with corrugations horizontally disposed, often gives a pleasing effect.

Some prefer differing lengths of sheets—breaking joints.

We make WEATHER-BOARD SIDING and BEADED SIDING, also of iron, in sheets 8 feet long. (See pages 33 and 34.)

FOR IRON FRAMES.

The Side Laps should be riveted every 8 to 12 inches, and end laps on every other corrugation.

To fasten the sheets to iron beams and purlins, a cleat of band iron, ¾ or 7/8 inch wide should be passed around the purlins or beams and riveted at both ends to the sheet; by contracting or pressing this cleat toward web of beams or purlins, a tight and secure fastening is made which allows for contraction and expansion of the sheet.

For other directions, see foregoing.

Lead Washers are a useless expense with our Pat. Edge Corrugated Roofing.

Iron Ceilings.

The use of Iron—Corrugated, Crimped or Beaded—for Ceiling purposes is somewhat of a novelty, but has proven eminently successful and satisfactory.

Our Iron Ceilings can be applied directly to joists if latter are level, or to rough sheathing over the joists or over the plaster. In the first case work is not so rapid as in the second where sheathing is used, and in some places is not attended with as good results. The advantage in the case of applying iron over plaster is that it can be done without removing the old plaster, and thereby very little dirt is occasioned; besides, it does not greatly interfere with business if the iron is put up in a store or office room. This item of cleanliness where re-ceiling is necessary is indeed important.

Builders and all practical men know that it is useless to adopt plaster ceilings in business houses, factories, etc., where there is much jarring or vibration from machinery and handling of heavy goods, for this will soon cause the plaster to fall off. Whenever a very small leak in a roof permits rain to drop down upon the plaster ceilings, it soon causes that portion to loosen and drop off, and it can never be repaired neatly.

Wooden Ceilings, although not subject to the same criticism as above on plaster, are inflammable, apt to shrink, and are not always perfectly dust-proof from above; then the cost is fully as great if a neat pattern is used. Wooden ceilings are of course not so durable as sheet iron materials and are easily combustible.

The weight of Metallic Ceilings such as we make is probably not over 20 per cent of the weight of plaster, so that this item figures conspicuously in preparing frame work for any room of good size, churches, halls or stores.

Plain Iron Ceilings are but very little more expensive than plaster, while ornamental metallic designs cost no more than paneled wood ceilings, frescoed plaster, or fancy designs in paper.

We always give full instructions for applying the different styles of our ceilings, as the case may require, whether over plaster or to joists or sheathing.

It is impossible for us to convey any true idea of the appearance of our Metallic Ceilings by the use of a wood cut, and the colors and style must always be harmonious to the general surroundings.

We have several different materials adapted for ceilings, and we can send samples whenever desired. We also make special designs for par-

Send for Illustrated Ceiling Circular.

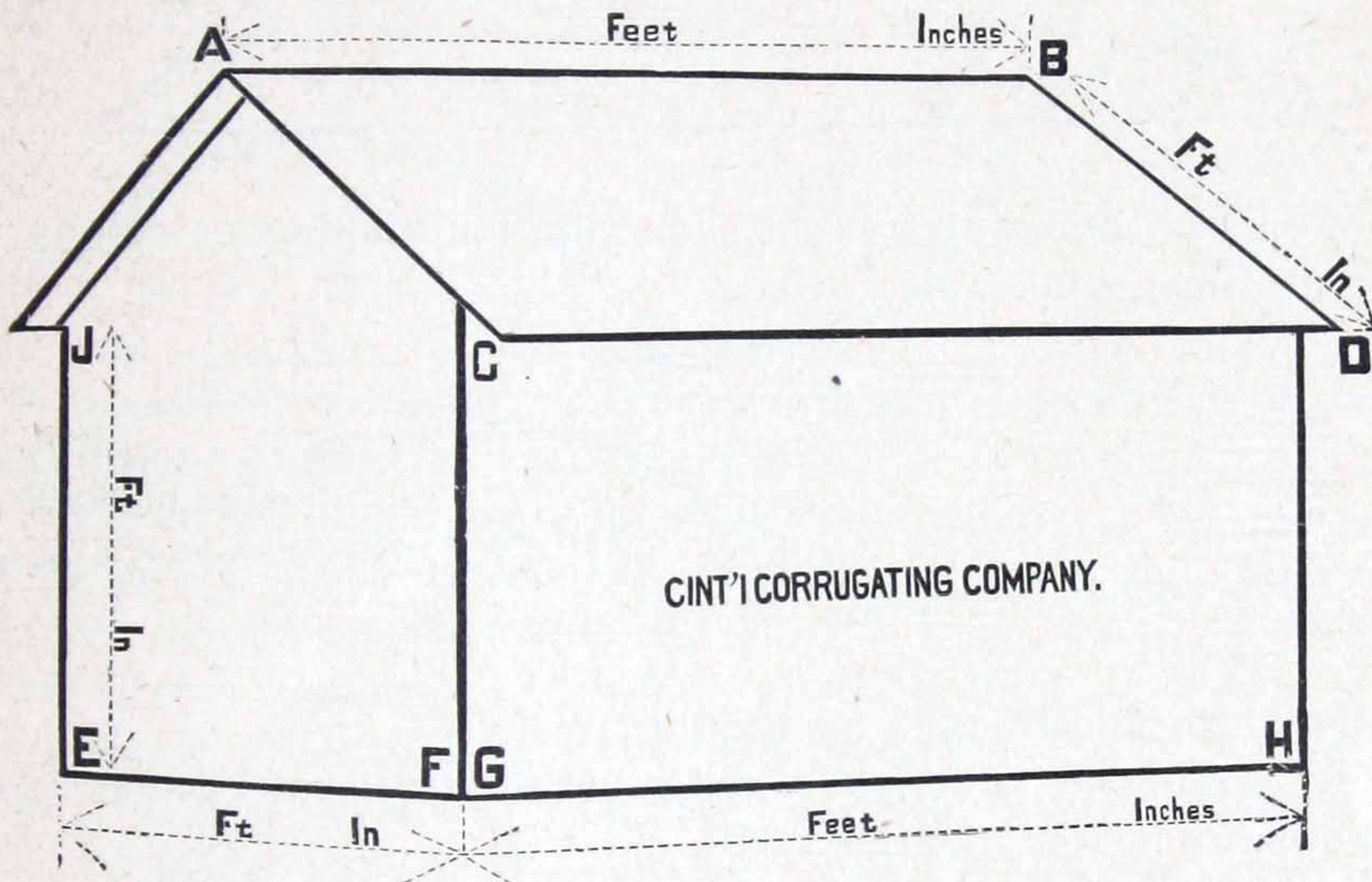
ticular rooms, and always prefer to quote prices after accurate dimensions are furnished. Always state height of ceiling from floor, whether the iron is to go over plaster, on joists or sheathing, what the room is to be used for, direction in which joists run, and whether a plain or ornamental ceiling is desired, whether any projection, etc.

HOW TO ORDER ROOFING AND SIDING.

(USE LOOSE SHEET INCLOSED HEREWITH.)

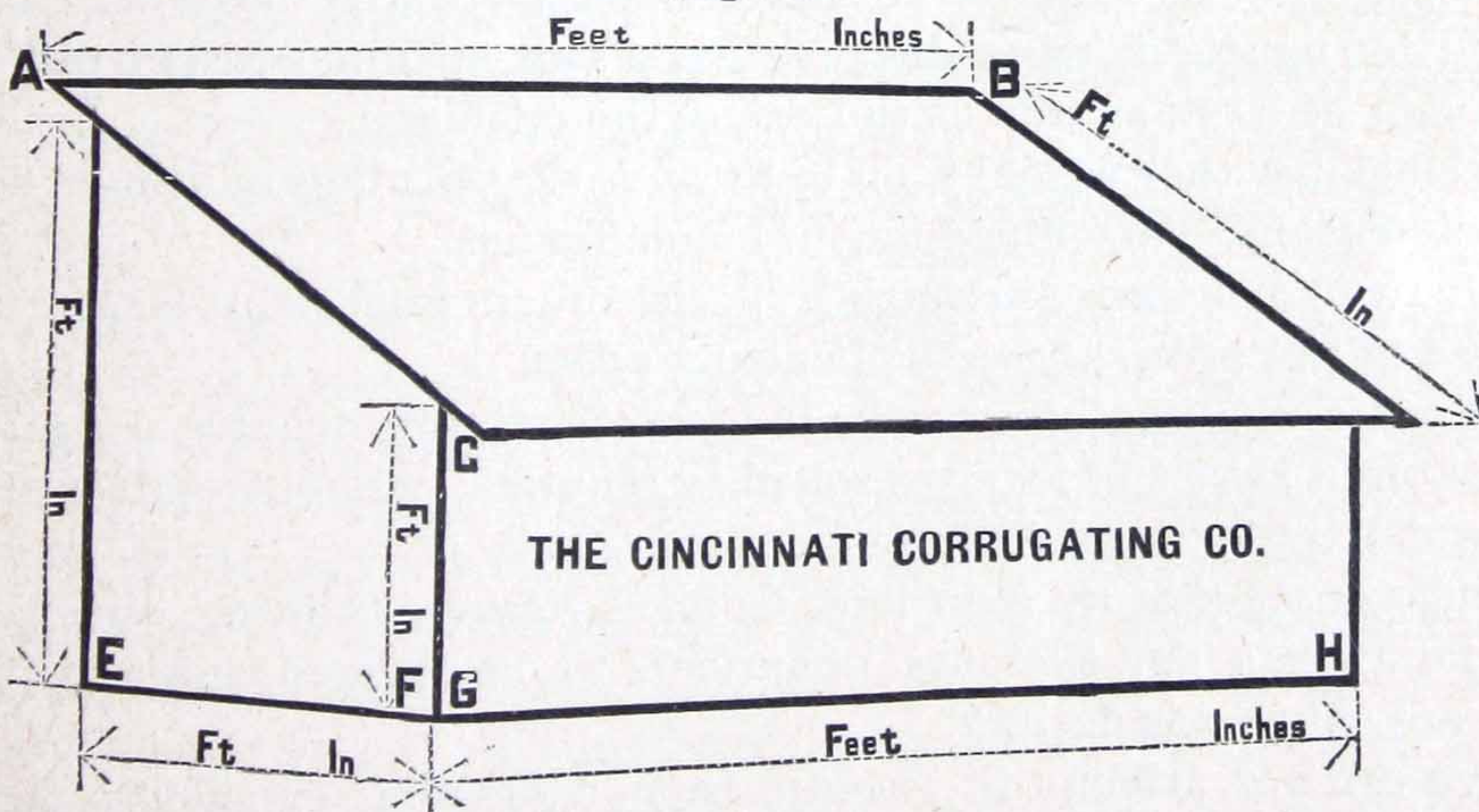
For Ridge Roof Building, furnish us dimensions indicated per

Fig. 20.



For Shed Roof Building, furnish us dimensions indicated per

Fig. 21.



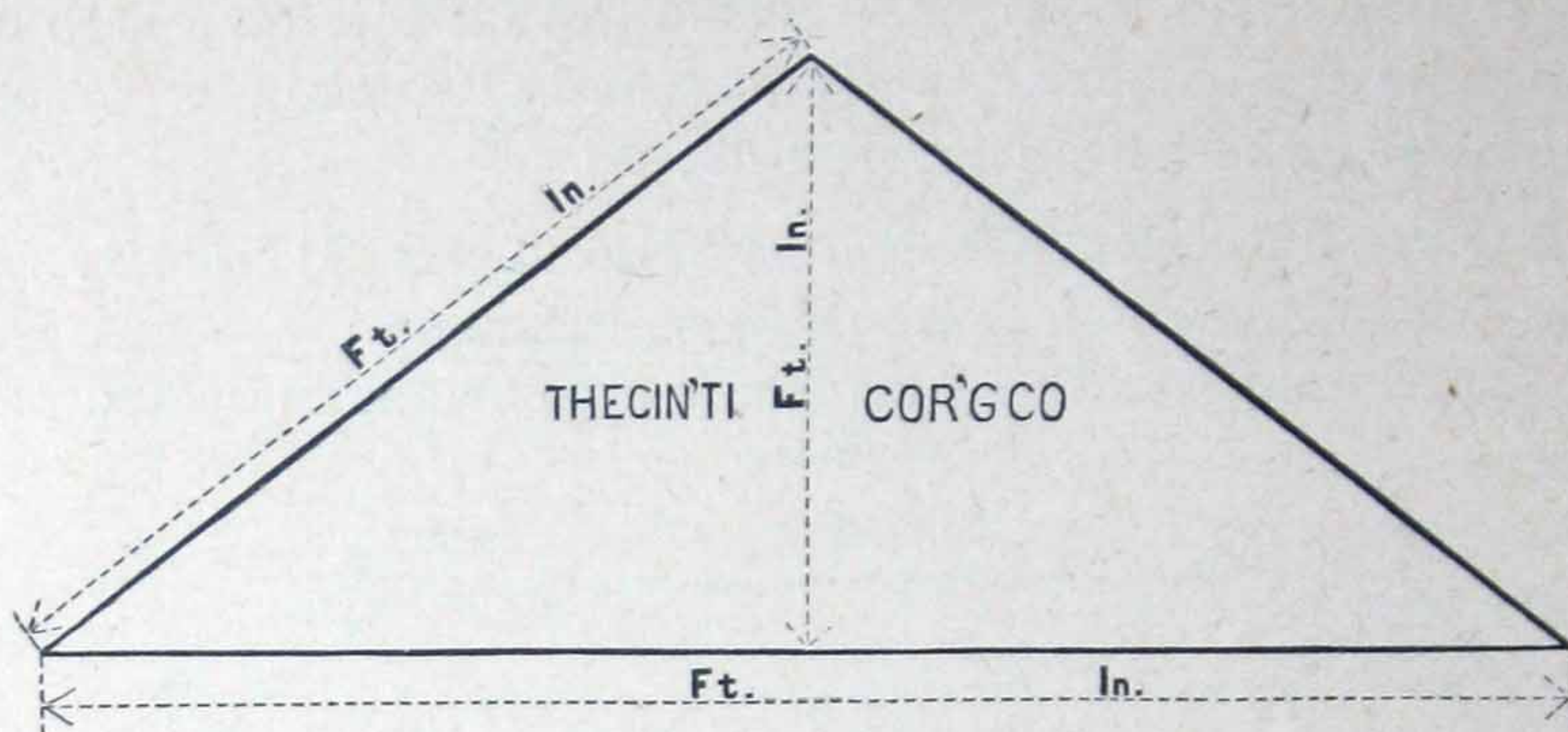
Allowing in above cases for necessary projection at eaves, ends, etc.

Our "Patent Edge" is the only Corrugated Iron suitable for Roofing.

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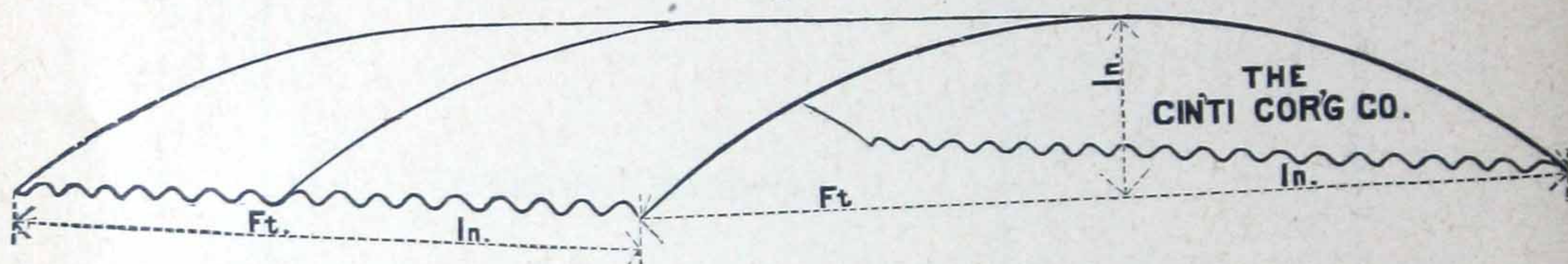
For Gables, furnish us dimensions indicated per

Fig. 22.



For curved sheets, always state whether for Roofing or ceiling, and furnish us dimensions indicated per

Fig. 23.



Allow for projections, if for roofing.

If for Ceilings, state exact distance between webs of I beams, lengths and number of spaces to be covered.

If shoes are used, state thickness of iron used in same, and give sketch of section of shoe and width of same.

If you want us to cut to fit around openings, latter must be exactly located by figure showing distance from said openings in two different directions, at least, as well as the size of the openings.

Remember that we cut Iron to fit *up to* the openings indicated, hence your dimensions of openings must include frames.

Unavoidable waste, in cutting special orders from stock, is invariably charged at full price, and cost of cutting added.

If ordered about three weeks in advance, and in quantity to justify, we can often have special sizes rolled as required, without extra charge, saving much waste and extra labor.

Please note that we *must* have detailed *figures*, showing dimensions on all drawings and sketches of surfaces to be covered, and especially when any cutting is desired.

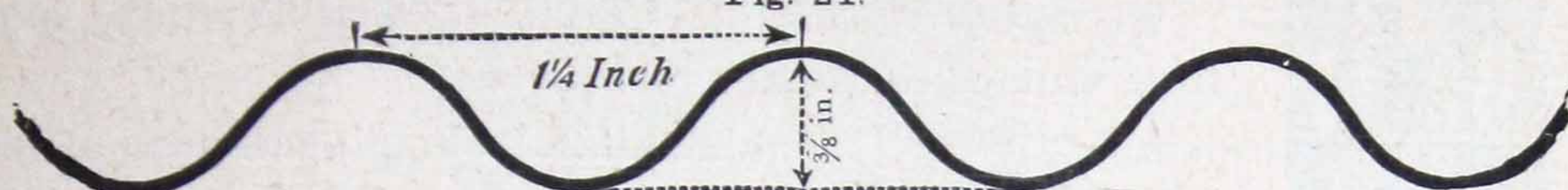
We can not attempt to execute from a drawing or sketch, merely made to scale, without figures, as even the slight difference, almost

Our Patent Edge 2½ inch Corrugated Siding has a Panelled Appearance.

unavoidable, between two persons measuring the most accurate drawing will produce a misfit in cutting special orders.

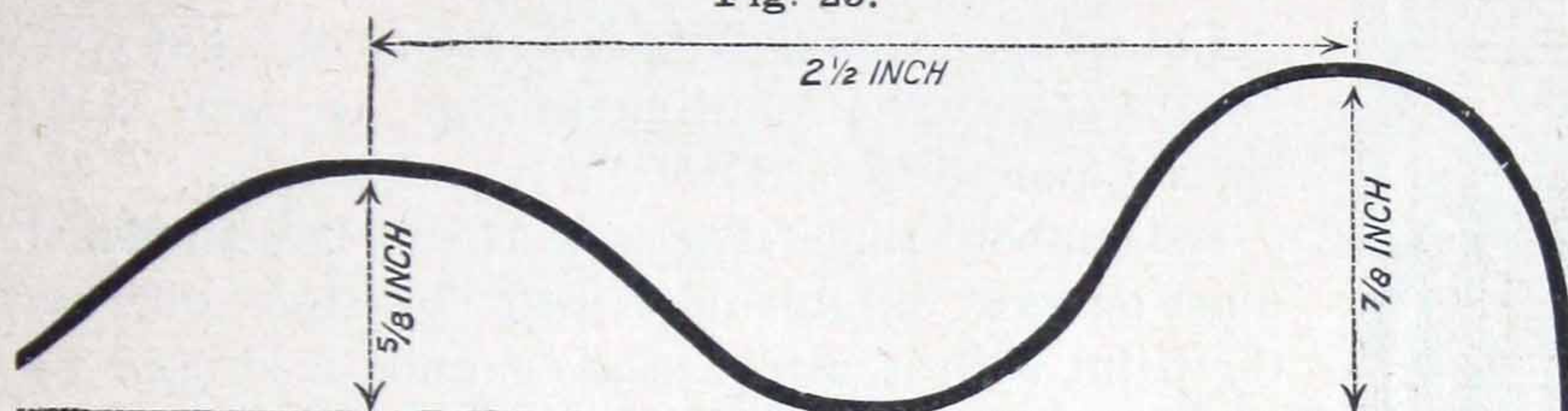
We rarely find drawings accurately made to the scale indicated.

Fig. 24.



Shows full size of our 1 1/4-inch Corrugations.

Fig. 25.



Shows full size of 2 1/2 inch Corrugations; one interior Corrugation, 5/8 inch deep, and Patent Edge Corrugation, 7/8 inch deeper.

Owing to the form of our Patent Edge Corrugations it requires four per cent. less of our Corrugated Iron to cover a square than that of other manufactures. See pages 10 and 23.

We furnish Corrugated Iron black, painted and galvanized.

We rarely have calls for black, or unpainted iron, however, as it has become generally recognized that, for the best protection of the metallic surface, no moisture must be allowed to come in contact with it before painting.

In shipping before painting, the iron incurs great risk of becoming wet, rusted, and thereby injured.

In painting we use the best Metallic Paint, *thoroughly reground with pure Linseed Oil in stone mills by steam power.*

Before painting, every sheet is rigidly inspected, and rejected if found imperfect.

We paint all sheets two coats, thoroughly applied by brushing.

Inferior methods and materials are not effective or cheap at any price.

This paint will not fade, crack or scale off; impervious to water and proof against fire sparks; has a nice finish and a handsome color.

The quality of the original coating is far more important than that of subsequent repainting, and the latter will be required much earlier and oftener if the factory painting is inferior.

Galvanized Iron is universally recognized as the most durable.

Our Coating is done with the greatest of care, and is superior in every respect.

No Oil but Linseed will Prevent Rust.

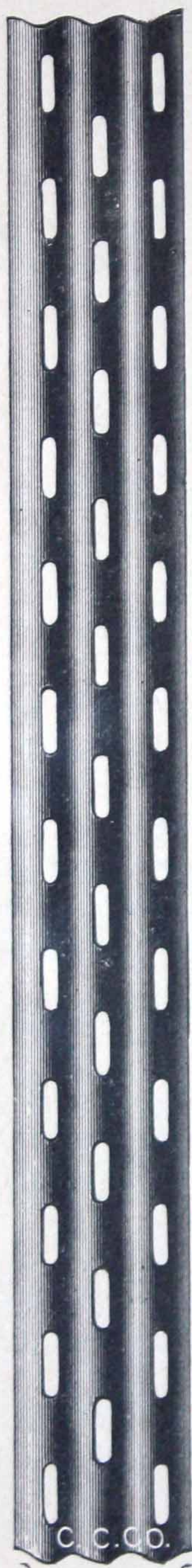


Fig. 26.

We omit to encumber this issue with references, as our list is too numerous and general, but will name our customers nearest to you on application.

We have patrons in every State and Territory, and from Canada to Mexico inclusive.

All goods delivered in suitable shipping condition, on cars, without extra charge therefore, unless in lots less than eight squares or equivalent.

Let us have complete specifications of what you want, and, as costs vary from time to time, we will make you special quotations at lowest rates current.

Remember that double-worked, box-annealed iron must be most durable, as it will not scale off, carrying the paint with it, as does the common iron used by irresponsible makers.

Iron Lath.

Fig. 26.

Shows our Corrugated Perforated Metallic Lath for fire-proof buildings.

This Lath is far superior to any other form of Metallic Lathing, and can be adapted to any kind of furring.

It possesses the rigidity which wire lath lacks, and has ample openings for plaster, as shown in cut. The plaster also adheres firmly to the surface of these laths.

The corrugations of our Lath give ample support for plaster.

Our Lath is being used very extensively in Government Buildings, over 180,000 square feet being used in the U. S. Custom House and Post-office in Cincinnati.

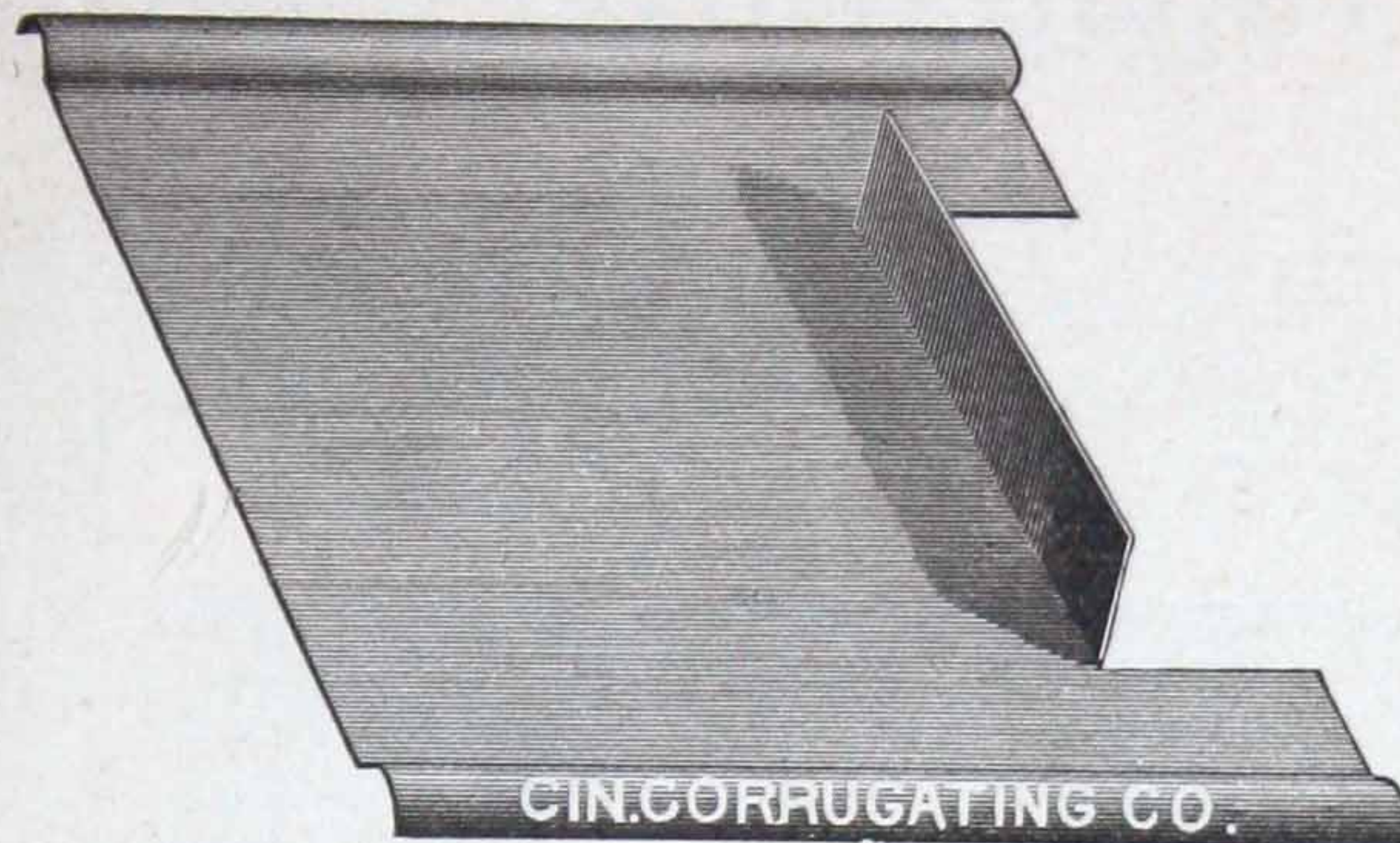
We can furnish this in any regular lengths not exceeding ten feet. Those in stock are ninety-eight inches long, three corrugations wide.

No. 27 Iron is generally used for Lath, with $1\frac{1}{4} \times \frac{3}{8}$ inch corrugations; width of three-corrugation Lath, $3\frac{7}{8}$ inches.

We can make other widths and lengths and gauges.

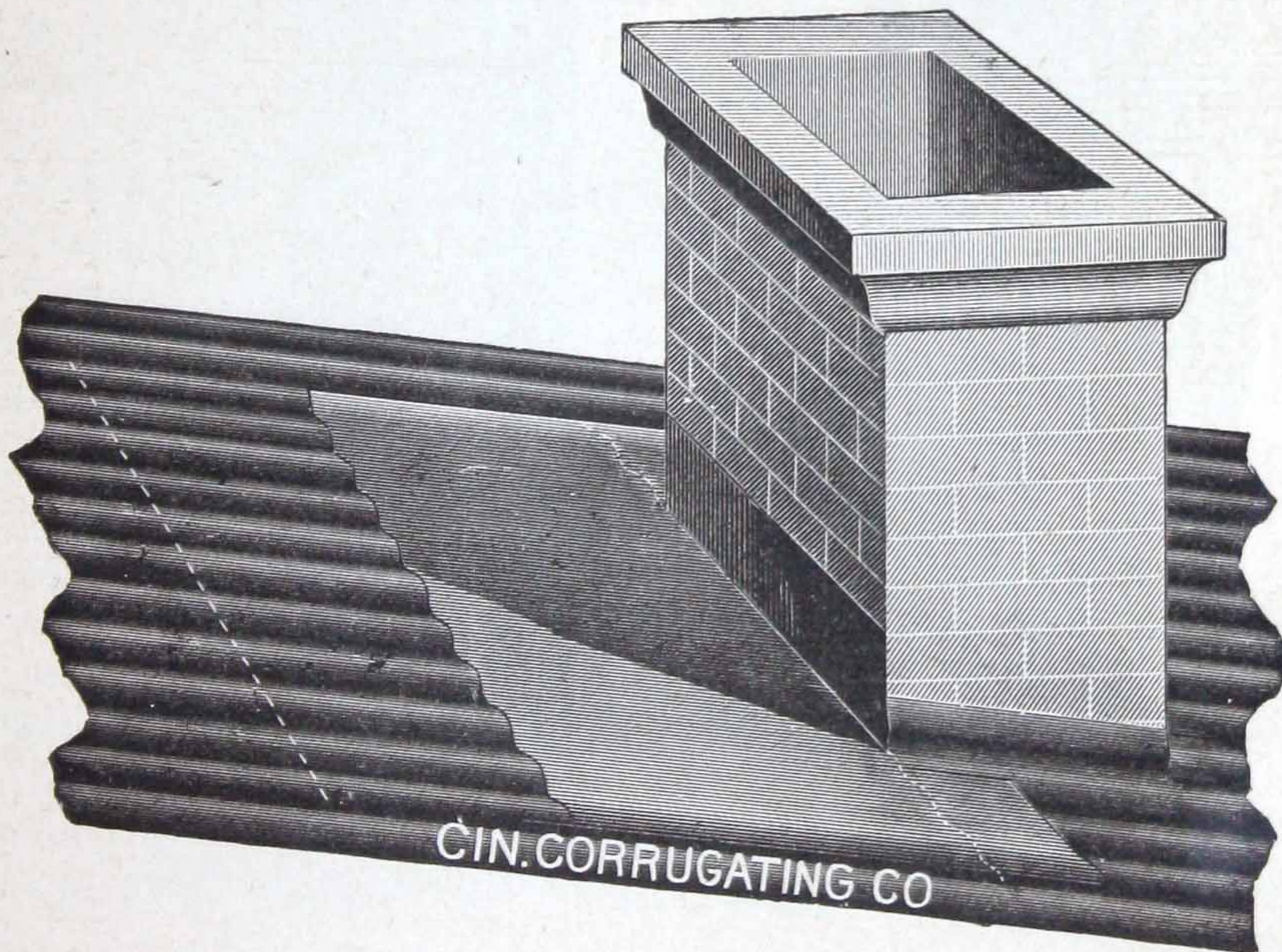
Is Price the Only Consideration?

Fig. 27.



Shows a Flashing for chimneys, etc., to be made from a piece of flat sheet iron; can be formed when used.

Fig. 28.



This Flashing should run up several inches under the Corrugated Iron, which should stop off from the upper side of chimney far enough to allow rain to escape freely.

The corrugations shown in Fig. 27 are to be formed over a corrugation of the roofing,

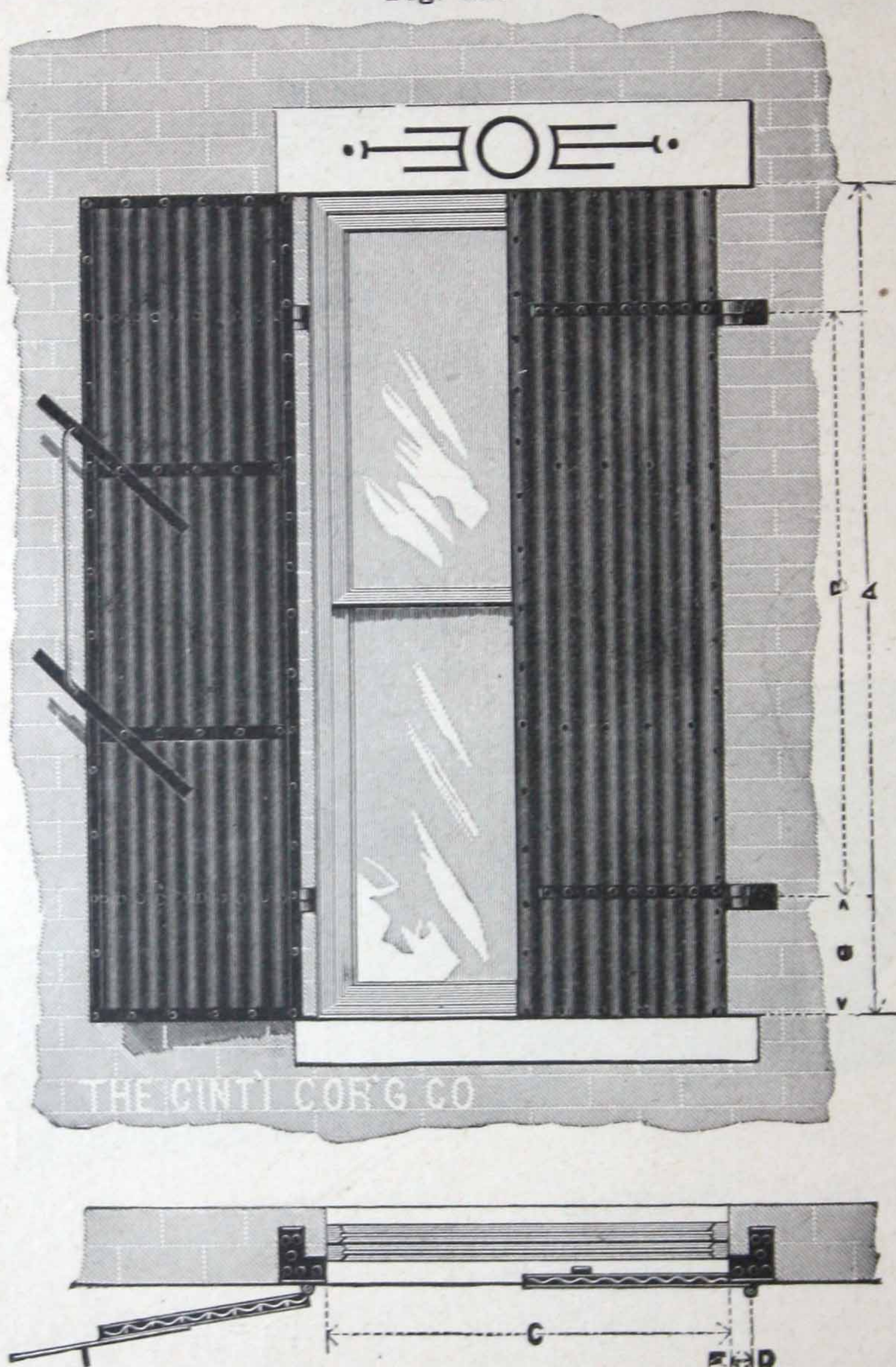
The Corrugated Iron is to be flashed up at the sides of chimney, as shown in Fig. 28.

Use cement freely. Counter Flashing may be used if desired.

Other Makers can not Recommend Their Corrugated Iron for Roofing.

Corrugated Iron Shutters.

Fig. 29.



We make several different styles; and must have accurate dimensions of each opening.

Send for Special Circular on Shutters.

Measure EACH opening separately.

COPYRIGHTED.

Special Notice.

We particularly invite attention to the fact that we have perfected machinery whereby we furnish all our regular 2½-inch wide Corrugated Iron Roofing, and Siding, with our Patent Edge Corrugations ¼ inch deeper than those in the interior of the sheets and of form as shown in Fig. 13.

These Corrugations are also made so that the outer edges are nearly vertical instead of flaring, as is usual with iron corrugated with all other processes.

The advantages of this improvement are :

First, that the nails used in fastening can only be driven near the *tops* of the highest corrugations, and it is thus impossible for rain to leak through, as the nail heads thus cover the holes best, and water drains away from nails promptly.

Second, that the flange of the outside lapped corrugation of this style hugs tightly, while the ordinary Roll Corrugated Iron is only held tight at the nails, and flares open between, admitting rain freely.

With our improved machinery we make a perfect sheet of Corrugated Iron, guaranteed uniformly straight, flat, free from holes, warps and all imperfections.

Such a Corrugated Sheet as we make can not be made by any other manufacturer, as we are sole Licensees.

One Patent Edge Corrugation lap, at side of sheets, for roofing is more effective than a lap of two corrugations of other make.

Each sheet is sheared on ends and sides, making it perfectly square. Every corrugation is perfect, having a uniform depth entire length of sheet.

Side Corrugations are finished to make a tight, neat joint, of a paneled appearance. See pages 10 and 19.

Every Corrugation is a channel in itself, carrying off its share of the water quickly—not allowing it to remain and rust the roofs or flood the joints.

It provides for contraction and expansion without warping or displacing the sheet.

There is no solder to crack off with the heat as with tin.

It is the cheapest covering, considering its lasting qualities.

It never wears out if kept properly painted.

It is easier to put on than any other metal covering.

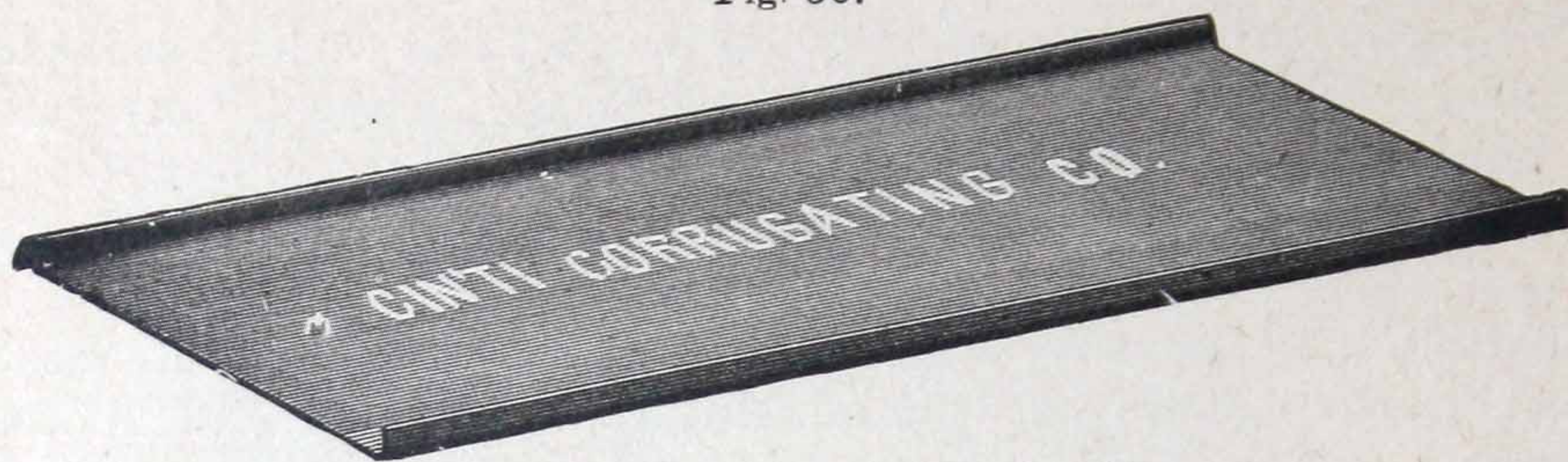
Any one who can drive a nail can attach it.

It can be taken off and moved from one building to another.

Accurate Corrugating can not be done with Rolls.

Our Plain Roofings.

Fig. 30.

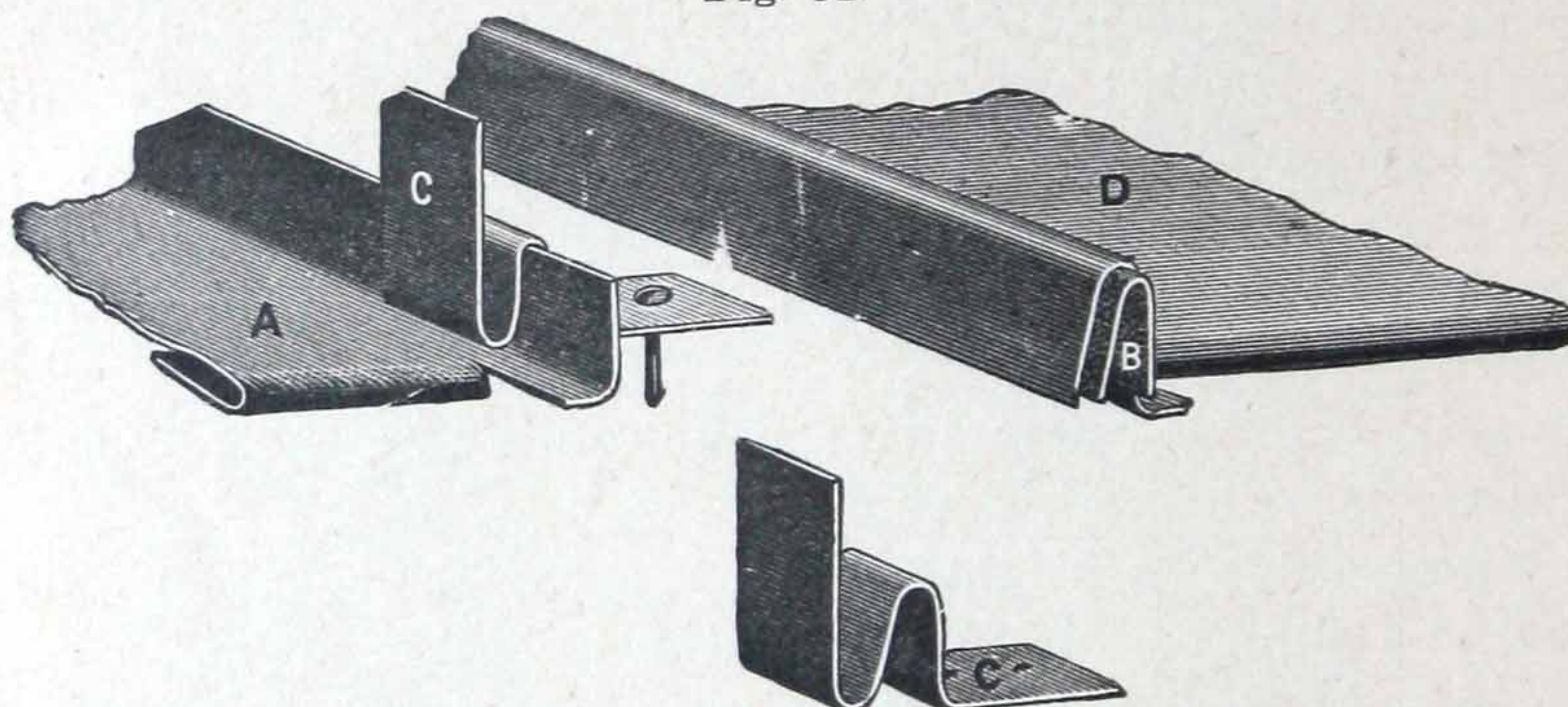


SELF-CAPPING AND PACKED

Standing Seam Steel Roofing.

Sheets as shipped, 96 inches by 24 inches, will cover $93\frac{1}{2}$ inches by 24 inches.

Fig. 31.



DETAILED DESCRIPTION.

We present above an illustration of our improvement in Metallic Roofing, as applied to Plain Sheets, with which it is principally used.

The novelty and merit of the invention consist in the application of a Water proof packing in the standing seam of the roofing sheets, thus effectually preventing their leaking.

Letter A in the cut represents a sheet of Roofing in the position in which it is first laid upon the sheathing; B, a strip of Paraffined Felt, bent lengthwise, and fitted into standing seam of D.

The first step in laying this roof is to secure sheet A to the sheathing, which is done by the application of a cleat C, the first curve of which fits over A.

The Cleat is fastened to the sheathing by Steel Wire Nails driven through it at the point of dots shown on the plane of C.

6 $\frac{1}{3}$ Sheets to the Square.

COPYRIGHTED.

When A and C are thus placed and secured, the upward extension of cleat C remains in the same position as shown in Fig. 31.

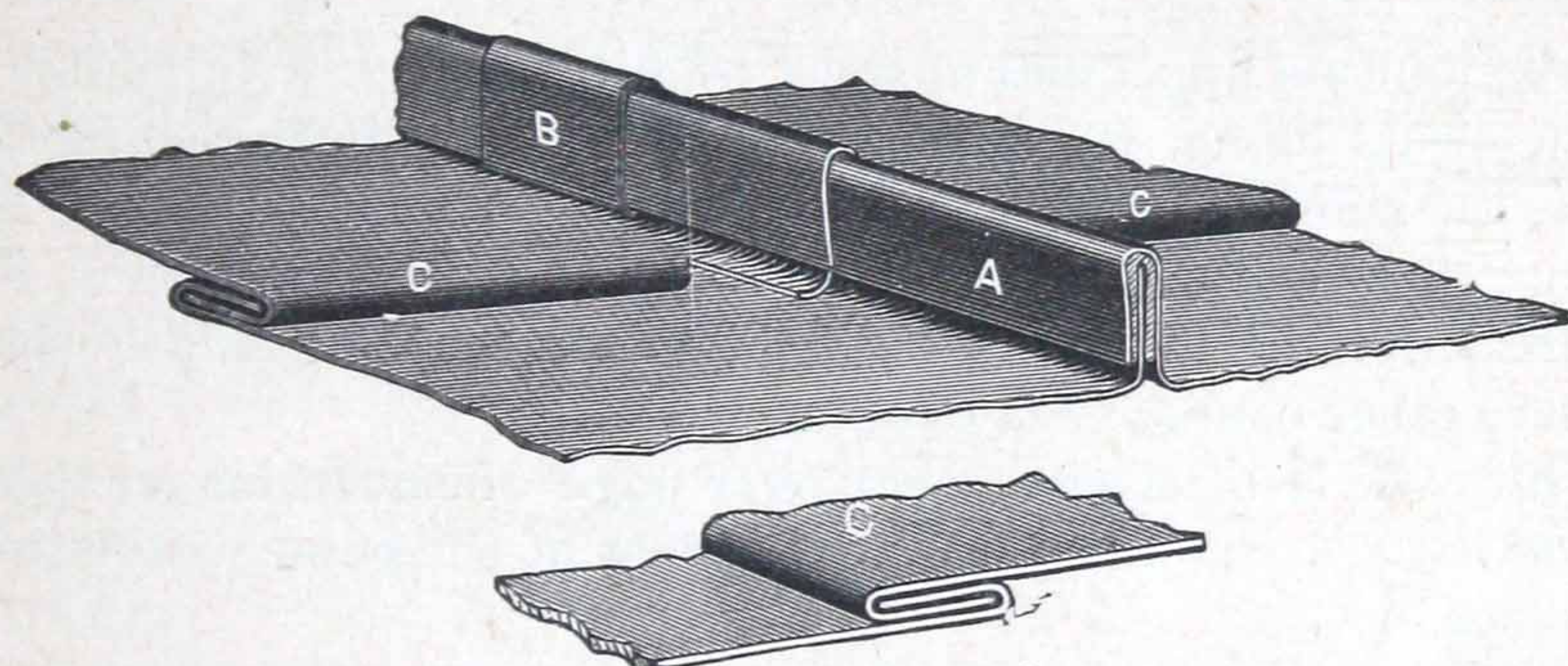
The ready packed Standing Seam of the next roofing sheet D is then placed upon and pressed downward over A and first curve of cleat C.

The upward extension of cleat C is then turned downward over the crimp of D, which fastens the sheet to the sheathing.

It will be observed that the Standing Seam of D thus forms a Steel Cap, integral with the sheet, covering the joints, and that the sheets are held to the sheathing *without being punctured with nails*, the whole being held to the sheathing by the cleats, which may be placed as frequently along the joints as may be required, or say 12 inches apart.

It will also be observed that the sheets require no forming, except at the ends, which are locked in the usual way, as shown at A, Fig. 31, and at C, Fig. 32.

Fig. 32.



We always ship this Roofing with Packing fastened securely *in place*, so there is nothing more to do with it in using the roofing than if it were not present.

This Roofing can be attached to "lath" or to sheathing, but not directly to rafters—for this use our Corrugated or V Crimped Roofing is most suitable.

This Roofing is covered by thorough *brushing* with the best mineral paint, which is *reground* in pure linseed oil. This renders our Paint the most adherent and permanent in the market.

The Standing Seams, which form the cap, being made from the sheet, can not loosen or blow off.

The Packing fills each joint and closes it effectually against moisture.

Its Weight per square (10x10 feet) is nearly eighty pounds (80 lbs.), nearly double the weight of tin, one-third the weight of shingles or gravel, and one-sixth the weight of slate, making it the most desirable roof.

Lightning, Water, Fire and Wind Proof.

COPYRIGHTED.

NONE BUT THE VERY BEST SOFT STEEL

Is used in this Roofing. This we make in our own Rolling Mills, every sheet being rigidly inspected, and all imperfect ones are rejected.

The material is painted on both sides with two coats of our Metallic Paint.

General Directions for Laying P. S. S. Roofing.

Commence at the left-hand end of the roof, at the eaves; take the sheet and straighten out the double standing seam or flange, and turn it over and nail against the barge board or flash up against the parapet wall (as the case may be); in latter case counter-flash in usual manner.

Straighten up the single flange with mallet or tongs, so it will stand vertically.

Make joint on upper end of sheet by turning lock with jointer; then place the cleats along the single seam or flange, about one foot apart; then join on another sheet the same way, turn locks at upper ends of sheets up, those at the lower end down. See A, Fig. 31, and C, Fig. 32.

"Break Joints" in laying by using short or half length sheets to start every other course from eaves to ridge.

Nail the ends of sheets down over edge of sheathing at the eaves.


Be sure to place one cleat on each sheet at the point where the cross seam comes.

The locks may all be formed before sheets are sent up on the roof.

Each sheet is snipped, each end $\frac{3}{4}$ inch in at each side ready for forming locks before shipping.

When the comb or ridge is reached, allow $\frac{3}{4}$ inch to turn up at the top, which is done by using the jointer, snip the flange $\frac{3}{4}$ inch, then turn it up and put cleats about one foot apart.

This will finish the first course.

Then lay the next sheet with double flange or seam over the single flange, with the packing in the  crimp, press it down and turn the ends of the cleat over, so as to hold it in place; then take the tongs and press it together.

Each length of standing seams must be closed at once with tongs as completed.

Avoid pressing the standing seams too close at tops—this is important.

This finishes the standing seams; continue this until this side of the roof is completed.

Protect Your Buildings from Fire and Save Insurance.

COPYRIGHTED.

Be careful to keep standing seams straight in line—you will thus have handsomest and most effective work.

The other side is laid in the same way, and at the ridge, when the sheet is to be cut (if not quite long enough add a piece,) leave $\frac{3}{4}$ inch to turn up to form a flange to meet the other side.

After this side is all laid draw the two flanges together with the tongs, then take caps, such as shown at B, Fig. 33, and fit them over the two flanges on the comb, bend the end of the cleats over to hold them, and press together by using the tongs.

A hip is made in a similar manner, and valleys are formed by hammering out the double flange and bending it over like **C** with the jointer, then throw the single flange over the same way, and lay this sheet in the valley, cleating it each side; then put the packing in flanges, and hook the roofing sheet into it and force it down to close both sheets, making it water-proof.

Where warm air, steam or sulphur will come in contact with under side, use our Paraffined Felt Lining.

We always ship tools and fastenings with orders unless otherwise notified.

We furnish tools for laying this Roof, and charge actual cost for the same, as follows :

Tongs, per pair,	\$1 50
Jointer,	50
Snips,	1 50
Wooden Mallet,	25
Total,	\$3 75

And will allow the same as charged for them if returned in good condition, freight prepaid. Always notify us when you return tools, attaching tag to identify them.

We recommend using a wooden mallet instead of a hammer for closing cross seams or locks.

After roof is all laid, mix the dry paint furnished with boiled linseed oil, eight pounds to the gallon, and apply with a flat brush.

If any holes are in the roof—caused by laying or miscuts, or flashing corners—work some of the paint into a putty or cement form first, paint the broken places, and then work the cement in.

This will harden and effectually stop all leaks.

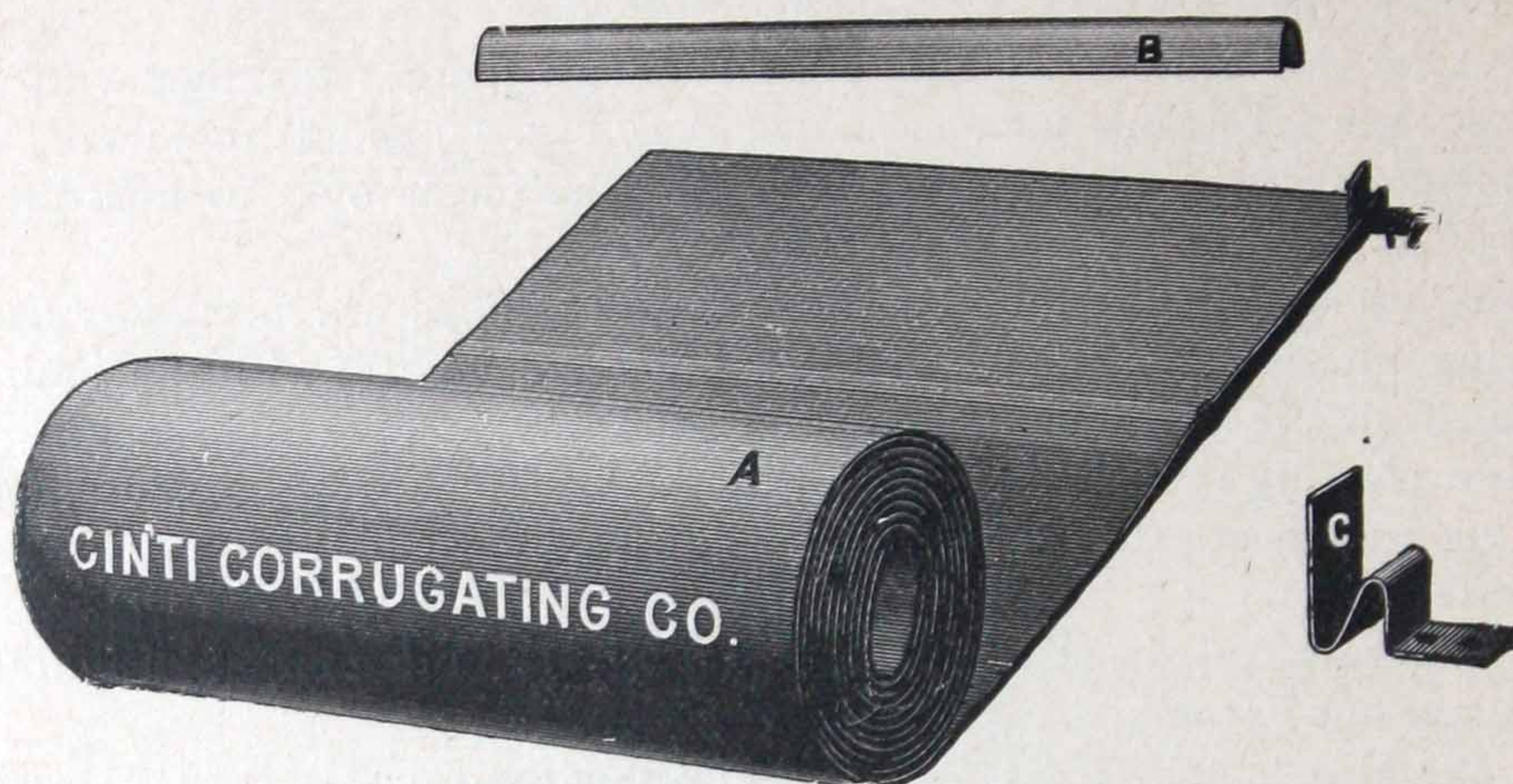
Nails, cleats and extra paint, dry, are all furnished at cost.

Small caps, for ridge roofs only, without charge, if you give us the length of your ridge in ordering.

We recommend our Corrugated Roofing for Applying over Shingles.

Roll and Cap Steel Roofing.

Fig. 33.



For roofs of dwellings, stores and other buildings having a fall of only one-half inch to one inch per foot, and when the rafters are not shorter than sixteen feet, we recommend the use of our Roll and Cap Roofing, illustrated in the above cut.

The reason this style of Roofing is more effective than other kinds for nearly flat roofs, is, that we manufacture it in rolls fifty feet long or more, from sheets which are twenty-six inches wide by eight feet long, and the cross seams every eight feet are formed by us very perfectly with improved machinery, and when the flanges are bent up on each side these cross seams extend up to the top of these flanges, and there is almost no possible chance for leakage.

Being in rolls, this style of roofing is more convenient to handle on roofs where there is but a slight slope to the rafters, as the side seams (which must be formed on the roof) are more easily made when the roof is nearly flat. Hence, when a roof has a pitch of say two inches per foot or greater, or in any case where rafters are shorter than sixteen feet, we recommend the use of our Standing Seam Roofing (Catalogue, page 24,) as being equally effective and more convenient to apply, it being in sheets eight feet long by two feet wide, with flanges already formed on sides of each sheet.

At three inches, or greater pitch to the foot, any of our styles of Roofing will be thoroughly effective, including the Corrugated Iron. (See Catalogue, pages 5, 10, 13 and 23.)

Model Samples Mailed on Request.

COPYRIGHTED.

DESCRIPTION.

The rolls, as usually made, are fifty feet long and twenty-six inches wide, being composed of painted sheets, firmly jointed at ends by our Improved Lock Joint, on our patented machinery, so that the joints can not become detached, or move from their position.

Paraffined felt Packing is inserted in all cross locks.

If customers request it in ordering, and give exact length of slope to be covered, we will make the rolls of such length as will exactly cover the lengths of slopes given, not exceeding one hundred and fifty feet.

This is of great convenience in applying, and a saving of material.

Caps "B," as shown in illustration, with paraffined felt packing therein, also cleat "C," barbed steel wire nails and extra paint, dry, are furnished with this Roofing at ten cents per square.

As this style of Roofing does not require boxing or crating, you do not have to pay freight on packages, and it is much easier to handle in transit than roofing in crates.

We wrap each roll of Roofing with heavy paper that will protect the paint from being scratched in transit.

We deliver on board cars at this city without charge, except on very small orders, when the drayage will be added.

SPECIAL TOOLS TO BE USED.

One pair Edging Tongs	\$2 50
One pair Tongs for closing caps	1 50
One pair Snips	1 50

Total cost	\$5 50
----------------------	--------

We always send these tools, also caps and fastenings, unless we are directed *not* to send them; but will remit charge for tools promptly on return of them to us in good order, freight prepaid.

Our Sheet Metal can be soldered after scraping the surface bright.

Directions for Applying Roll and Cap Roofing.

For use of our Roll and Cap Roofing it is best that the rafters be sheathed over entirely.

Commence at either side of roof, turning down the outer edge of roofing, and nail to the face board, or flash up against the wall, as the case may be.

Turn up the other edge of roofing with the edging tongs, forming a flange one inch high for general cases.

We, as a rule, send out tongs for one-inch flanges, but can furnish them for one and one-fourth or one and one-half inch flanges if requested, for use on extremely flat roofs.

The same kind of flanges to be turned upon each side of each strip of roofing as the work progresses.

Nail the cleats down to the sheathing at intervals of about twelve inches along the flanges of strips first laid, so there will be a cleat at center and end of each cap, and after forming the flanges on the next strip, place it so that the flanges of the two strips touch, and are in a *straight* line.

Before laying the next roll of iron, commence at eaves and put the caps, "B" over the two adjacent flanges, and as each piece of capping is laid, put the next piece of cap in place, lapping it about one inch down over the first piece as before, continuing to the ridge.

Next, bend the vertical tongues of the cleats "C" over the caps and flanges tightly, by hand, proceeding to *at once* close up the joint perfectly tight with the tongs sent for that purpose.

When one side of a ridge roof is covered, nail cleats to sheathing twelve inches apart along flange at the ridge, before laying the opposite side, for use in fastening ridge caps.

The Roofing must be nailed over the edge of the eaves, and must be flashed up one inch each side at ridge, the flanges so formed to be covered by the same kind of caps as used previously on side seams, attached with cleats as before explained.

Hips are to be formed on the same principle, after the sheets are cut to fit—allowing enough to turn up for flanges along the hip.

Valleys are to be connected with the Roofing by a flat seam, similar to that used in locking the ends of the sheets. Fig. 32.

Where warm air, steam or sulphurous smoke will come in contact with under side, use Paraffined Felt lining.

Repaint Metallic Roofs Every Two or Three Years for First Five Years.

Standard V Crimped Iron Roofing.

Fig. 34.



Regular Sheets carried in Stock are 8 feet long and 2 feet between Centers of Crimps, covering $93\frac{1}{2}$ inches by 24 inches.

We also make to order 6 and 10 feet lengths.

This style of Roofing has been in use probably as long as any other style of Plain sheet-iron roofing, and has made for itself an enviable reputation.

It may be applied to sheathing boards or lath, or directly over the old shingles without removing the latter, the same as shingles or our Standing Seam Roofing, but, since the nails are driven directly through the roofing sheet, a wooden Λ strip and sheathing, it can be fastened down more firmly than some other styles of plain roofing, and is therefore very favorably received in those parts of the country where high winds are of frequent occurrence.

It can also be readily and successfully applied directly to rafters.

All sheets are snipped at ends, ready for turning end locks, before shipping.

As shown by the above cut, each sheet has a crimp in Λ shape on each side.

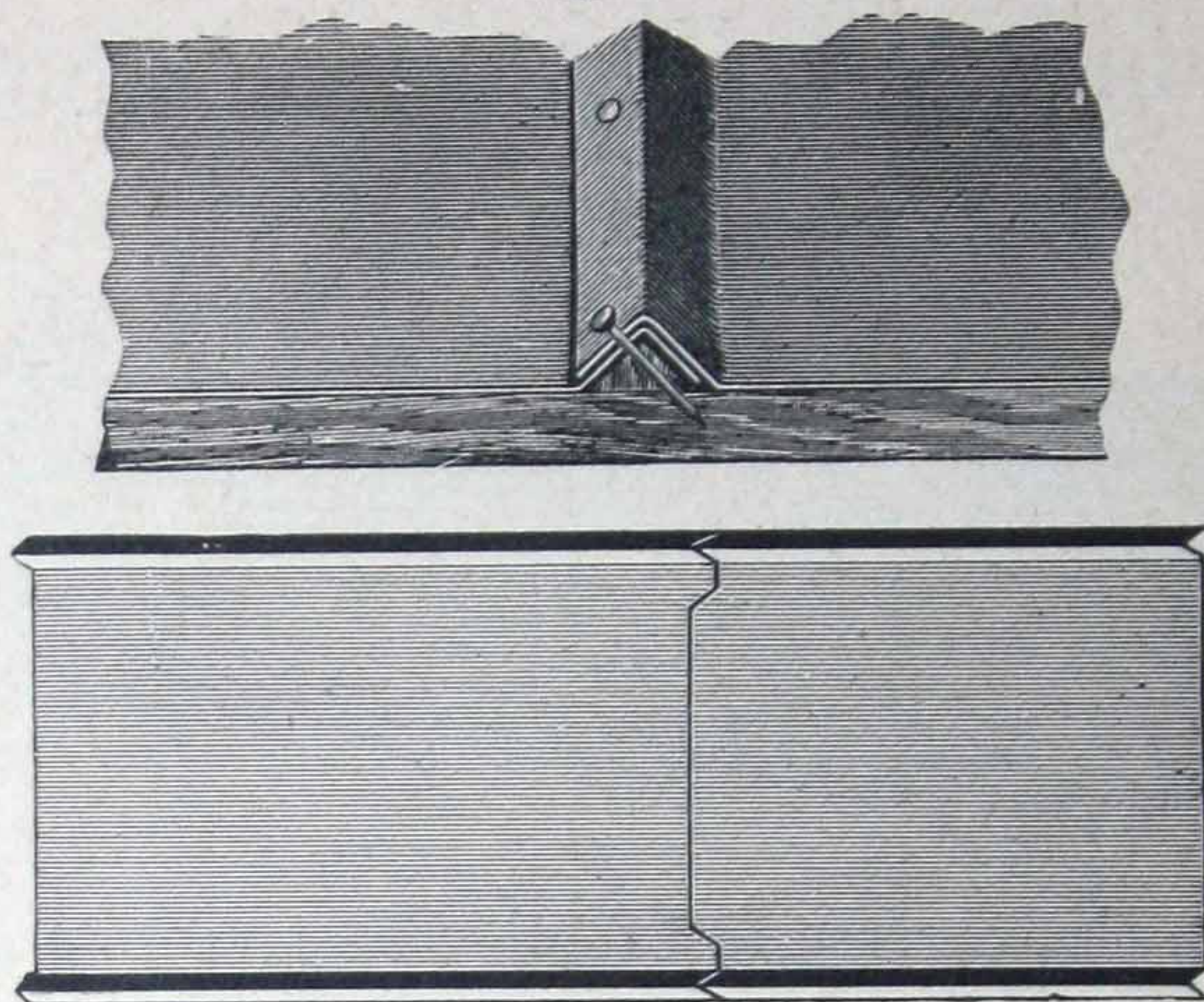
In placing the sheets on the roof these crimps lap over each other and also over a triangular strip of wood which serves to support the joints firmly.

We recommend the use of our Steel Wire Nails $1\frac{3}{4}$ inches long, so that the nail after being driven through the two edges of iron sheets and the wood Λ strip, is long enough to reach $\frac{3}{4}$ inch into the sheathing.

Afterward Every Five Years.

COPYRIGHTED.

Fig. 35.



The above cuts explain how to nail sheets down and how two sheets are spliced or hooked together to make any length desired; of course for long rafters it may be necessary to hook together some three, four or five sheets or more. This is to be done as explained on pages 26 and 27.

For making tight joints at ridges of comb roofs, it is best to use our small size Capping, illustrated in Figs. 4 and 14 of Catalogue, (for prices see list.)

Allow the roofing sheets to project one inch over the eaves, and then bend this projection down against the wood frame-work, nailing it fast to prevent wind and water blowing underneath.

We can not recommend this style of roofing to be used where the pitch is less than two inches to the foot; for nearly flat roofs we suggest the use of our Standing Seam Roofing, or Roll and Cap Roofing. (See pages 24 and 28.)

This Roofing being applied without the use of cleats or other patent fastenings, is most simple and easy in its application, and is, therefore, often preferred by farmers and others who can not employ mechanics.

Where warm air, steam or sulphur will come in contact with under side, use our Paraffined Felt Lining.

The tools necessary to properly apply this Roofing are:

Pair 'Tinnners' Snips	\$1 50	} These charges are actual cost.
Turning Iron (or Jointer)	50	
Wooden Mallet	25	

We always send tools, nails and dry paint unless otherwise notified.

We will remit the amount charged for tools if they are returned to us in good order, freight prepaid. Always notify us when you return tools and mark their shipping tag with your name.

Allow Corrugated Roofing three inches Pitch, or more, to the foot.

Iron Weather-Boarding.

Fig. 36.



Regular Sheets as shipped are 8 feet 2 inches long, having 5 faces or "boards" of $4\frac{1}{2}$ inches each.

As an effective and fire-proof substitute for wooden weather-boarding or "clapboards" our iron sheets formed in imitation of them, as shown by the above engraving, are attracting general attention and meeting with perfect success wherever used.

To all who desire a fire-proof building, the necessity of using Iron Siding is apparent, and our iron sheets of Weather-boarding have been found to supply the want admirably.

This Weather-boarding is made of good, strong, iron; and we paint both sides, before shipping, with our iron-ore paint of a red color, but we suggest, in repainting the iron after it is put in place, to use a stone or slate colored paint, thus adding much to its general appearance.

This material can be attached to rough sheathing boards or directly to studding placed 16 inches apart between centers.

In applying our Weather-boarding, it is necessary to lap the sheets one crimp at sides and about 2 inches at ends. Place nails about 4 to 6 inches apart along the horizontal laps when the iron is put on sheathing, and immediately under the projecting crimp always. When applying to studding, nail to each stud. At vertical laps place one nail at the uppermost edge of each face or "board."

Felt Roofings are not Durable or Cheap at any Price.

COPYRIGHTED.

Place a few nails throughout the body of the sheet so as to hold it firmly against the studding or sheathing.

All nails must be driven directly under the projections to avoid indenting the iron.

No special tools are required in putting on this iron, and any ordinary mechanic can do the work well and neatly if ordinary caution is used to keep the lines straight horizontally. *This is important.*

We make a special Angle Strip of iron to be used with this material at the corners of buildings to cover the edges of the weather-board sheets and make a neat finish. This must be ordered specially.

In ordering Iron Weather-boarding it is always best to furnish us with a pencil sketch, with figures showing accurate dimensions of spaces you wish to cover. (See enclosed order blank.)

Beaded Sheet Iron for Ceilings and Siding.

Fig. 37.



Regular sheets measure 25 inches and cover 2 feet in width, and are 5, 6, 7 and 8 feet long.

Each of the nine crimps in our Beaded Ceiling Iron is $\frac{1}{2}$ inch wide, and, being three inches apart center to center, each sheet covers 2 feet in width on the ceiling after lapping over the side crimps.

Nothing is Really Cheap unless Effective for its Intended Use.

It is our usual custom to make, and carry in stock at all times, sheets 8 feet long, and of Standard Roofing Gauge, and unless otherwise specified, we will ship this thickness with all orders placed with us.

This style of ceiling is very desirable in stores, warehouses, factories, engine rooms, boiler rooms, cotton gins, paper mills, etc., where it is necessary to have a fire-proof and durable ceiling and siding.

Beaded Iron Ceiling can be applied directly to rafters, studding or over plaster; but it can be put on to sheathing boards more easily and quickly, besides presenting a better appearance.

When desired we can get up special designs for ceilings of Beaded Iron, with paneling strips, molding, ornaments, etc., the same as for Corrugated Iron.

No Special tools are required to apply this Beaded Ceiling.

The sheets should be lapped one or two inches at ends, and over one crimp at sides.

Whenever desired we will estimate total cost of ceiling any room, if pencil sketch is sent to us with accurate dimensions marked thereon.

Our Beaded Sheets can be cross striped with paint to imitate brick.

Weights Per 100 Square Feet Flat

By which our iron and steel for corrugating are rolled, are for

Standard Roof Gauge,	64 Pounds.
No. 26 Gauge,	72 "
" 24 "	88 "
" 22 "	112 "
" 20 "	140 "
" 18 "	196 "
" 16 "	260 "

Being Birmingham W. G., as given in Haswell's Engineers' Book for over forty years, and used by Phoenix Iron Co., Union Iron Mills, Pottsville Iron and Steel Co., and many other prominent concerns.

Investigate, then order from the most reliable makers.

Our Metallic Paints.

All of our material is painted on both sides with two coats of our superior Metallic Paint.

This paint has proved to be the best roofing paint in the world.

It is made by time tried methods approved by the longest experience, consisting of the best metallic paint thoroughly reground in pure Linseed Oil, in a stone mill, operated by steam power.

It is especially adapted as a protection to iron, tin or wood.

Apply the third coat after the roof is put on, and it will last for years without deterioration.

All imperfect sheets are rejected by us before painting.

Our drying rooms have 15,000 sq. ft. floor space, and we carry an assortment of about 500 tons of Painted Iron constantly, hence can furnish you Painted Iron thoroughly dry, without necessity of using excessive dryers and thinners, which greatly lessen the durability of the paint.

The inferior oils and methods used by some cannot produce paint which will protect iron or steel sheets; hence roofing and siding covered with such paints are not cheap at any price, as they cannot be durable.

No real substitute for Linseed Oil has ever been discovered. Piqua is next to the largest and best Linseed Oil market in the United States.

DIRECTIONS FOR APPLYING OUR METALLIC PAINT ON OLD METALLIC ROOFS.

First clean off the roof, removing all scaly paint or other matter, so that the surface may be firm and clean. Look carefully for all holes, broken seams, etc.

If none, proceed to paint, rubbing the paint out well as you apply it. If any breaks in joints or seams, mark them with a scratch-awl. Mark all holes made by rust or nails. Then coat each place with the paint.

Take good cotton unbleached muslin, tear in strips large enough to cover one inch each side of the break. Take a trowel and spread the cloth with our Cement Paint. Then lay it over the broken place, patting it down firm and smooth.

Put a small lump of the Cement Paint into all the rust and nail holes, and paint lightly over it.

Treat leaks around chimneys, flashings, or skylights, same as broken seams. Then paint the whole surface.

Keep the paint well stirred, and rub it out well. No dryer is necessary.

If paint is too thick, add one quart of boiled linseed oil to the gallon.

This can also be used for painting any kind of metal or wood which is exposed to the weather.

In our Factory every detail is carefully supervised.

General Advantages of Iron and Steel Roofing.

OVER SHINGLES.

Shingles were once made of the best selected timber, and lasted longer than now; they are now made mostly of limbs, old cuttings, and such inferior timber as can not be used for anything else; are short-lived at best, also frequently leak, and are easily combustible.

The average life of shingle roofs is now ten years, and in towns where coal is used, much less.

Insurance is about one-third less in case of an Iron or Steel Roof.

OVER SLATE.

Slate roofing is very costly, all things being considered.

Slate roofing will crack by freezing and thawing, and from heat of adjacent fires, or being walked upon will break and slide off.

Six or seven times as heavy as iron, it requires a strong and expensive structure to bear it up, and an extreme pitch, which makes a large amount of surface.

Slate often causes a building to settle out of shape, and the rule of measurement is always greater than for Iron Roofing.

There is great loss from breakage in using slate.

OVER TIN.

Some of our agents are tanners, and from them and our own observation we learn these facts: **the tin plate now used for roofing is made light, cheap and inferior**, to compete in price with iron and steel, which are now gaining the lead; the iron plates are so thinly coated with tin or lead that many are uncovered, and at best it is difficult to hold the solder strongly.

Solder is a weaker material than tin, and breaks from contraction, expansion, and other natural causes.

Our material both takes and holds paint far better than tin, and as **the paint is the protection to either iron or tin roofs**, the surface that holds paint the best is the safest to use.

Tin roofs get out of repair so often that there are five leaky tin roofs to one of our material.

Manufacturers who have large buildings and have used our Roofing, universally approve it.

Our Roofing is unquestionably the strongest and most durable.

Tin ought to be laid on tight sheathing, which costs about one dollar per square extra, while our Roof can be applied on "lath" the same as pine shingles, or over an old roof.

We manufacture the greatest variety of Fire-proofing Materials made.

IT IS RUST PROOF,

Costs less than tin or slate or shingles, and will outlast any of them.

The saving in insurance will pay the difference in a very few years, between this and the cheapest roof that can be put on.

It is suitable for all kinds of roofing, and can be laid where any other roof can, and is effective at one inch fall to the foot—although *a good pitch is good for any roof.*

Our method of forming the seams is acknowledged by all to make the best, the simplest, and most flexible joint ever invented.

This is evidenced by the favor with which it is received by architects, builders and mechanics, wherever it has been introduced.

There is no such a thing as a leaky roof, or one being blown off, when put on by our methods.

Our seams have sufficient flexibility to compensate for all expansion or contraction of the metal.

NONE BUT THE VERY BEST REFINED IRON OR STEEL

Is used in our Roofing. This we manufacture especially for our own use, and all imperfect sheets are rejected.

CISTERN WATER.

Those using the water from any of our Roofings will be pleased to find how much cleaner the rain-water is than from a shingle or gravel roof—both very retentive of dirt.

The covering being smooth, the wind keeps it clean from all dirt, leaving none to wash into the cistern.

Our paint, being made from pure oxide of iron and linseed oil thoroughly reground together, is not injurious in the slightest degree.

LIGHTNING.

Few persons realize the protection afforded during a violent thunder storm by being in a building covered with iron.

Prof. Mitchell and other scientific men say that it is impossible for a building to be *struck* by lightning when covered by iron.

The great surface exposed dissipates the electricity; it is only dangerous when concentrated.

Iron steamers are never harmed by lightning,

HOW LONG WILL IT LAST?

Every one knows that as long as iron does not rust it will last, and if it is kept painted it will not rust.

There never is any wear on the under side to take the paint off, and if the upper side is painted every two to four years we do not see anything to prevent its lasting fifty years, or more.

We always Corrugate Sheets before Painting.

National Iron Roofing Association Rules.

At a meeting of the above organization, held at Cincinnati, Ohio, March 23rd, 1887, the following resolutions were adopted as the uniform rules for measurements and weights of this Association, taking effect April 1st, 1887; re-affirmed January, 1888:

STANDING SEAM AND ROLL AND CAP.

Resolved, The rules of measurement in selling STANDING SEAM Roofing shall be as follows: When shipped as sheets, the full length of Sheets shall be measured with end locks turned or considered as turned: when shipped in Rolls, with the sheets locked together, the running length of the Rolls shall be measured together with the actual covering width of the Sheets or Rolls.

CRIMPED EDGE.

Resolved, The rule of measurement for V or CRIMPED EDGE Roofing shall be as follows: The *full length* of sheets shall be measured, without any allowance for end locks or laps, together with the *actual* COVERING WIDTH.

CORRUGATED AND BEADED.

Resolved, The rule of measurement in selling CORRUGATED Roofing, Siding or Ceiling, and BEADED Iron Siding and Ceiling shall be the full measurement after being corrugated or beaded, no allowance being made for either side or end laps.

SMALL CORRUGATIONS.


Resolved, That CORRUGATED IRON of less than 2 in. corrugation, and all IRONS CORRUGATED CROSSWISE of sheets be sold at not less than *five per cent. advance* over price of regular corrugated.

NAILS, ETC.

Resolved, That in no case shall NAILS, PAINTS, PAPER FELTING, WOOD STRIPS or TOOLS, be furnished free with Roofing, but shall be charged for as additional items in the Bill of Roofing.

PRICE LIST.

Resolved, That the following be the Price-List of the members of the Association on Painted Roofing.

Standard Roofing Gauge, "Roll Cap" Roofing, per square,	\$4.25
" " " Standing Seam " " "	4.00
" " " Crimped Edge " " "	3.75
" " " Beaded Siding and Ceiling, per square,	3.75
" " " Roll Ridge Capping, per lineal foot, 12c.	
" " "  " " " " " 10c.	
Standard Roofing Gauge, Corrugated, per square,	\$3.75
No. 26, " " " " "	4.00
No. 24, " " " " "	4.75
No. 22, " " " " "	5.75
No. 20, " " " " "	6.75

All orders less than 8 squares package and drayage *extra*.

Our Uniform Covering Widths are proving exceedingly popular.

Certificates of City Officials.

CINCINNATI, O., February 28, 1885.

TO THE CINCINNATI CORRUGATING CO.

Gentlemen:—My experience fully sustains the justice of the fire laws of Cincinnati, and the usage of the insurance companies doing business in our city, viz., in ranking Corrugated Sheet Iron with brick or stone for practical efficiency against fire.

JOSEPH BUNKER, Fire Marshal.

ST. LOUIS, October 19, 1878.

TO WHOM IT MAY CONCERN:

We, the undersigned, certify that, in our opinion, based upon experience, the corrugated iron buildings are as fire-proof as structures built of brick or stone, for the following reasons:

When wood is used as a framing for the corrugated iron buildings, its quantity is so small that it is insufficient to feed a conflagration, and when consumed, the iron still remaining in sheets, falling upon the fire, forms a shield, thus preventing the communication of the flames to adjoining buildings, while a brick wall crumbles and allows the flames to go in every direction. A whole town constructed of buildings covered with corrugated sheet iron, taking fire, would burn with less rapidity than brick structures, and, beyond doubt, no faster. We have these buildings in St. Louis, and no difference is made in the insurance between them and brick structures.

C. T. AUBIN, Civil Engineer,

Secretary St. Louis Board of Underwriters.

H. CLAY SEXTON, Chief Fire Department, St. Louis.

STATE OF MISSOURI, } ss.
CITY OF ST. LOUIS. }

BE IT REMEMBERED, that on this 19th day of October, 1878, personally appeared before me, C. T. Aubin, Secretary of the Board of Fire Underwriters of the City of St. Louis, and H. Clay Sexton, Chief of the Fire Department of the City of St. Louis, who are personally known to me to be the same persons whose names are subscribed to the foregoing statement, and being by me first duly sworn, each for himself upon his oath, said that said statement was true to the best of his knowledge and belief, and that the signature hereunto appended was his true and genuine signature.

In Witness Whereof, I have hereunto set my hand and seal, at the City of St. Louis, this 19th day of October, 1878.

J. P. DAWSON, Notary Public.

Term expires August 6, 1881.

[SEAL.]

NOTICE.

We do not imitate other manufacturers, and respectfully ask that others will not copy our illustrations and verbiage, thus avoiding legal punishment under the United States Law.

Our Sterling Goods make Steady Customers.

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INDEX.

	PAGES.
Arches	7, 8, 18
Awnings	11, 12
Beaded Ceiling	11, 16, 34
Black Iron	19
Buildings	6, 9, 13
Ceilings	4, 8, 11, 16, 18, 34
Certificates	40
Clap-Boarding	33
Corrugated Arches	7, 8, 18
Corrugated Sheets	5, 8, 9, 10, 23
Curved Roofs	7, 9, 11, 18
Curved Sheets	7, 11, 18
Dimensions of Sheets	5, 10, 19, 24, 28, 31, 33, 34
Directions for Applying	5, 8, 13, 14, 15, 16, 26, 27, 30, 31, 32, 33, 34, 35
Directions for Ordering	5, 17, 18
Durability	4, 37, 38
Elevators	8, 9
Elevator Sheets	8
Estimates	4, 5, 16, 17, 18, 20, 34
Fastenings	24, 25, 27
Flashing	7, 14, 21
Galvanized Iron	19
General Advantages	37, 38
Insurance	4, 37, 38
Iron Frames	15
Lath	20
Lengths of Sheets	5, 8, 10, 20, 24, 28, 31, 33, 34
Merits of Corrugated Iron	4, 23, 37, 38
Metallic Paint	19, 25, 27, 33, 36, 38
Moldings for Ceilings	35
National Iron Roofing Association	39
Packed Standing Seam Roofing	14, 24, 25, 26, 27
Painted Iron	19, 36
Patent Edge Corrugation	10, 19, 23
References	20
Ridge Cap	6, 11
Ridge Joint	6, 7, 11, 14
Roll and Cap Roofing	28, 29, 30
Sheets to the Square	5
Shutters	22
Square—Definition of	5
Tools, Special Roofing	27, 29, 32
V Crimp Roofing	31, 32
Weather-Boarding	33
Weights per Square	35
Width of Sheets	5, 10, 24, 28, 31, 33, 34



The Cincinnati Corrugating Co.

OUR CORRUGATED AND PLAIN SHEET METAL COVERINGS

FOR ROOFS AND SIDES OF BUILDINGS OF EVERY KIND,

Have conclusively shown their superiority, and are specially adapted, and the best article known for covering all kinds of structures, such as

COAL BREAKERS,
ROLLING MILLS,
NAIL MILLS,
R. R. BUILDINGS,
WAREHOUSES,
BLAST FURNACES,
FOUNDRIES,
MACHINE SHOPS,
BLACKSMITH SHOPS,
SMELTING WORKS,
BRIDGES,
BARNs,
AWNINGS,
CAMPS,

RESIDENCES,
GRAIN ELEVATORS,
FLOURING MILLS,
CAR SHOPS,
CAR ROOFS,
SNOW SHEDS,
COTTON GIN HOUSES,
COTTON WAREHOUSES,
COTTON COMPRESS BUILDINGS,
POWDER HOUSES,
SAW MILLS,
MARKET HOUSES,
STABLES,
SHEDS.

—◆— CEILINGS —◆—

FOR OFFICES, BOILER AND ENGINE ROOMS, RESIDENCES, DRY
HOUSES AND ALL FIRE-PROOF BUILDINGS,

SHUTTERS. DOORS. LATH.

